

RB10264



Presented to the
LIBRARY of the
UNIVERSITY OF TORONTO
by

Mr. K. Bryden, M.P.P.

HANDBOUND
AT THE



UNIVERSITY OF
TORONTO PRESS



Digitized by the Internet Archive
in 2022 with funding from
University of Toronto

<https://archive.org/details/31761114664600>



PROCEEDINGS

OF THE

SELECT COMMITTEE APPOINTED BY THE
LEGISLATURE OF THE PROVINCE OF ONTARIO,
TO ENQUIRE INTO AND REPORT UPON MATTER
IN CONNECTION WITH TOLL ROADS IN THE
PROVINCE.

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Mr. D. J. Collins, Secretary.

VOLUME V

Thursday, October 20th, 1955.
Enroute To Harrisburg, Penna., (U.S.A.)

R. C. Sturgeon,
Official Reporter,
Parliament Buildings,
Toronto, Ontario.

F I F T H D A Y

Enroute to Harrisburg, Penn.,
Thursday, October 20th, 1955,
9:30 o'clock, a.m.

The Committee reconvened in the City of New York, and boarded a bus for Harrisburg, Pennsylvania.

PRESENT:

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Messrs. Auld,

Yaremko, Q.C.,

Sandercock,

Root,

Jolley,

Mackenzie,

Mainley,

MacDonald,

Mr. D. J. Collins, Secretary.

APPEARANCES:

Mr. W. J. Fulton, Director of Planning,
Ontario Department of Highways.

Mr. W. Q. Macnee, Traffic Engineer, Ontario
Department of Highways.

Mr. Henry Rose,

Director of Public
Relations, New Jersey
Turnpike Authority.

- - - -

MR. ROOT: How many can they carry per day?

MR. ROSE: 1,200 per hour; 113,000 per day
on this Turnpike.

The engineers studying this, thought when they made the specifications in 1939, it would take 110,000, but they have gone over that. They can travel 50 and 60 miles without any interruptions.

In the widening, we must consider we are opening the connection known as the "Lower Bay Valley Connection", and we anticipate an increase there.

We have no restrictions with regard to height and weight as they have in other places.

Some of them have special licenses. We do not issue them.

- - - -

MR. ROSE: We are going over the Passaic River bridge, the longest one we have on the Turnpike. It is one and one-half miles long.

The one we just came over -- that is, the river -- was the Hackensack.

MR. ROOT: What about your tolls when moving

that volume of traffic?

MR. ROSE: It would be 85 cents per vehicle -- about \$85,000.

We carried this year an average of 71,000 vehicles at an average of about \$66,000 per day.

MR. ROOT: How much per mile?

MR. ROSE: One and one-half cents.

MR. ROOT: And on trucks? The figure you gave was for passenger cars?

MR. ROSE: The trucks are \$5.00 mostly.

MR. ROOT: If you have a panel truck, the rate would go higher than on passenger cars?

MR. ROSE: Yes.

We will stop awhile at the overhead interchange, where we are making an extension into the counties going to the east.

Have you the story about the financing of these projects? All revenue bonds are pledging the credit of the state. It is fairly risk capital.

MR. ROOT: What interest will you have to pay on those bonds?

MR. ROSE: The initial bond issue of \$220,000,000 -- we paid 3-3/4 percent. For the last loan of \$340,000,000, it was 2-3/8 percent.

We have \$466,000,000 of bonds out today.

MR. ROOT: At what percentage?

MR. ROSE: I am not just certain on that.

MR. ROOT: Is part of this traffic from other states?

MR. ROSE: Yes, 60 percent. cross over our state. It is the only state like this. The traffic comes from New England, and is going south on this Turnpike, rather than going over the mountains.

MR. JOLLEY: When did you sell your first bonds?

MR. ROSE: 1950.

MR. JOLLEY: \$220,000,000?

MR. ROSE: Yes.

MR. JOLLEY: At 3-3/4 percent?

MR. ROSE: Yes.

MR. JOLLEY: And the last was at 2-3/8 percent?

MR. ROSE: Yes.

MR. JOLLEY: To what do you attribute the lower interest rate?

MR. ROSE: This (indicating) is an 8.2 mile extension from Newark to the Bay, and the Holland Tunnel. It is costing \$78,000,000. That is a little over \$8 million a mile.

MR. SANDERCOCK: Have you the figures in this envelope? (indicating).

MR. ROSE: Yes.

MR. SANDERCOCK: That (indicating) is the extension.

MR. ROSE: Yes, it is in the envelope, if you want to look at it.

At the same time, I want to show you what is happening here. We had something we thought was comparatively simple. We are eliminating all grade crossings into Newark, Jersey City, Elizabeth, and elsewhere.

That (indicating) is the Newark Airport Interchange. That is costing \$7.2 million, approximately, and there are a number of overhead structures there. As a matter of fact, about 30 percent. of the structures are overhead. The rest is fill.

And the fact that we are going through densely populated cities, which means the demolition of old homes which have been there for years, and some industries.

We cross five railroads in that section in about five miles.

MR. COLLINS (Secretary): Is the cost justified by the traffic it brings in?

MR. ROSE: Yes, we think so. The feasibility survey indicates that it will pay.

We have a provision in the bond resolution

which carries construction monies after the project is completed.

We anticipate carrying 15,600,000 vehicles over this extension alone, in 1956, and that will cover the interest and probably leave sufficient for operating costs, which will not be too much.

Ultimately, we are considering, with the Port Authority, the possibility of extending it from the Holland Tunnel to the Lincoln Tunnel. That will pass through the largest refinery area on the east coast.

This (indicating) is the Standard Oil Refinery Company, where we had to go right through their property, and that was the greatest project we had.

This will be finished by the 1st of April next year, and in operation.

These (indicating) are the wider parts of the public highway.

MR. YAREMKO, Q.C.: What made this Turnpike necessary?

MR. ROSE: The large congestion, and over-loading of the streets leading to the Holland Tunnel, and into Jersey City and Bayonne, which would be continuing for about fifteen years.

In the mornings, that is, between seven and

nine-thirty, and in the evenings from five o'clock until about seven-thirty, they are loading their trucks and cannot make deliveries.

The state did not have the money, and they could not build it. It is something which was needed for many years, but the cost was terrific, and if the state had built it, perhaps it could not have been built for forty years, too late for any relief.

MR. ROOT: It is a six-lane highway?

MR. ROSE: Yes.

MR. ROOT: And it carries 110,000 cars a day?

MR. ROSE: Yes. The peak is 113,000.

This year, we will average 71,000 a day. The engineer's estimate was 30,000 a day. We are doing today what the engineer estimated would be done by 1984. We are about 29 years ahead of the engineer.

MR. JOLLEY: Is this the section which is built on sand piles?

MR. ROSE: Yes. As a matter of fact, breaking all of it down, it is built on sand piles, that is, on meadow land.

MR. ROOT: Do you use concrete?

MR. ROSE: We only use concrete on bridges and structures. We are using here (indicating) asphaltum concrete. The foundation is from 18 inches

to 24 inches, and the pavement is another 18 inches or 24 inches, which makes it from 36 inches to 48 inches.

MR. ROOT: And the surface in existence you think is far more economical?

MR. ROSE: Yes. When we got bids on this paving, they were five and one-half million dollars less than for concrete. If the project saved five and one-half million dollars over a 30-year term, in regard to bonds, it means an investment of \$11 million. We are satisfied with it. It is working out very well.

We are now coming into Elizabeth, where we had to go through the heart of the city, with 24 crossings, and we made it all a parkway of concrete through that section, because of the number of intersections.

On the left, you will see the space where we are doing some face lifting. These (indicating) are paved all the way across, instead of having a pavement and shoulders.

MR. ROOT: Do you think you could have saved money if the state had backed your bonds?

MR. ROSE: Yes, but we could not get a bond issue "across" with the voters. They had to provide \$20 million, or \$25 million for new institutions.

The voters did not "go" for a bond issue.

This (indicating) is the machinery going through

old Elizabeth, where we tore down about 175 houses in this section.

We had to keep the streets open.

Here (indicating) is a place where we had some problem. The city filed a suit, asking us to build the Turnpike out along the waterfront, which would have cost some \$15 million more. They had previously agreed, but since we took over from the Highway Authority what they planned to initially build, we decided we would build it where it would be the most economical. The houses along there (indicating) were anywhere from 50 to 100 years of age.

The court decided in our favour, and said we had a right to do this, and that it was alright to go through the city.

We would have had difficulty if we had gone along the waterfront, as we would have disturbed what are known as the "riparian rights" of the Federal government, and it would have dislocated industry to some extent.

MR. COLLINS (Secretary): Are you paying for the state police?

MR. ROSE: Yes, we are paying that. It cost us about \$77,000 a year, or thereabouts. That includes hospital care, the furnishing of the cars, radio equipment,

and all that sort of thing.

This does not cost the taxpayers anything at all.

MR. YAREMKO, Q.C.: Would the officers be engaged just for the road?

MR. ROSE: Yes. They are assigned definitely to the Turnpike.

MR. YAREMKO, Q.C.: What mileage have you here?

MR. ROSE: 118 miles. Here (indicating) is the Standard Oil Plant, which we are going through now.

We had to move some of the large storage tanks and re-locate pipe lines for crude oil and by-products, without interrupting the operations of the refinery.

We started in 1952 on full operation. We started at the south end in 1951. This is the fourth year.

MR. FULTON: Do you own the refreshment areas?

MR. ROSE: Yes.

MR. FULTON: And get a share of the profits?

MR. ROSE: Yes, and much larger than the engineers estimated. We have shorter term leases, and better control over the operations.

MR. FULTON: What is the length of the lease?

MR. ROSE: Two years for the Howard Johnson,

and the City Service is for five years.

MR. MACNEE: You have the oil companies throughout?

MR. ROSE: Yes, one oil company -- the City Service. We have ten service stations, and are building three more right now.

In the first full year, 1952, the revenue was \$17,948,000, as against an estimate of \$7,600,000. In 1953, it was \$22,500,000 as against the engineer's estimate of \$8,750,000.

In 1954, it was \$22,554,000, as against the estimate of \$10,100,000.

So far this year, we have carried about 21,000,000, and we expect to carry 26,000,000. That is against the engineer's estimate of 11,100,000.

MR. MACNEE: You spoke about the engineer's original estimate.

MR. ROSE: Yes, they have revised their estimate at least three times since then.

Here (indicating) is a wide median strip in the centre, which is about 20 feet. They do go as high as 94 feet.

Down south, it is 26 feet, 16, 10, $10\frac{1}{2}$ and 71 percent. of our traffic is trucks producing about 22 percent. of the revenue.

When you get to Pennsylvania, you will find it is much higher.

MR. AULD: Their truck rate per mile is higher?

MR. ROSE: Yes, very much higher. They run up to \$20 or \$25. Our highest rate is \$5.00 for the full 118 miles.

MR. AULD: That is about 4 cents per mile?

MR. ROSE: Yes.

MR. AULD: And Pennsylvania runs about 8 cents?

MR. ROSE: Yes.

MR. ROOT: And the trucks will pay -- what?

MR. ROSE: About 22 percent.

MR. ROOT: And they will pay that rather than use the other roads?

MR. ROSE: Yes, because it saves them time. The exposure to traffic accidents is compressed to practically nothing.

The trucking companies have made certain studies on actual runs on roads and on the Turnpike, and they have come up with all kinds of savings to tires, transmissions and differentials.

MR. MACNEE: What is the estimated saving from New York to Philadelphia?

MR. ROSE: Anywhere from one hour to three hours. In the summer, it will take quite awhile to go on a public highway. The buses have been averaging about two hours on the Turnpike. They will take four hours on the highway. It is about a 50-percent. savings.

MR. COLLINS (Secretary): Do you find much industry re-located along here?

MR. ROSE: Yes. I should have pointed out some of them. The City Service is building a large laboratory in the southern section.

Several other companies are building laboratories in the north end, and plants are being constructed, if not actually on the Turnpike, close to the interchanges.

---The Committee stopped and inspected the City Service Station in Middlesex County.

---Upon resuming the trip, the following proceedings were had:

MR. ROOT: How many vehicles do you think you would need as a minimum to make this road pay?

MR. ROSE: We would need at least \$37,000. or \$8,000 a day. You mean for the present Turnpike?

MR. ROOT: Yes.

MR. ROSE: That would be \$9 million a year,

and we would have to take in \$32,000 or \$33,000 a day, which represents about 40,000 vehicles.

MR. ROOT: A day?

MR. ROSE: Yes.

MR. ROOT: Over the entire length?

MR. ROSE: Yes, over the 118 miles. That does not include the extensions.

We lease these places to Howard Johnson for restaurants, and to the City Service for oil and gas. We get about 4/10ths of a cent per gallon on gasoline, and 5 percent. on other products. With Howard Johnson, it is 4 percent. of the gross sales.

Last year, we collected about \$1,900,000 out of both services.

Now we are getting into the four-lane section, which is being widened to a six-lane. This has been underway since last May.

As you notice, we have it well signed. As a matter of fact, the attractive devices cost us over \$1 million. That is for everything you see in the way of attractive devices.

MR. ROOT: You say it takes 40,000 cars to make it pay?

MR. ROSE: Yes.

MR. ROOT: How much a mile does it cost you to build?

MR. ROSE: About \$2,480,000 a mile.

As you notice, we are putting some colouring into the signs, to take away the monotony of the road.

Here you will see some activities in connection with construction operations. We manage to keep two lanes in service all the time. As a matter of fact, we are using part of the inside shoulder to travel on.

MR. FULTON: When you put in the third lane, how do you do it?

MR. ROSE: We take the shoulder out, and put in a heavier foundation.

MR. FULTON: You have about a 10-inch foundation on the shoulders?

MR. ROSE: 18 inches; $4\frac{1}{2}$ inches for top material, $6\frac{1}{2}$ inches for base material, and about $6\frac{1}{2}$ inches of sub-base material.

It is all taken out and re-built. The shoulders have about a 10-inch base, I think.

We are coming now to a new development which is just coming in. There is quite a bit of oil company work up in the north around Linden, by the Sunoco, where they have put in a number of new storage tanks.

MR. MACNEE: What sort of progress have they made with the connection with the Pennsylvania Turnpike?

MR. ROSE: We think we will be through next year. The closer spans of the new bridge should be in by the 15th of next month. The deck paving is about 75 percent. finished.

There (indicating) is a new village on your right. That was all put up since the Turnpike came in.

MR. COLLINS (Secretary): It seems to have quite an effect on the development along the Turnpike?

MR. ROSE: Yes.

MR. ROOT: How far apart are your interchanges?

MR. ROSE: About fifteen miles.

MR. ROOT: There are no barriers on this road?

MR. ROSE: No, the only barriers are at the south end and at the north end.

We put a shoulder in here (indicating) instead of curbing it, as many motorists travel on the shoulders -- as many almost as on the pavement -- so we are making it all pavement.

--The Committee stopped at and inspected the Administration Building, at which time luncheon was served to the Committee as guests of the Authority.

MR. ROSE: The Commission meets every two weeks. They get no salary nor remuneration whatsoever. They are appointed by the Governor, approved by the Senate, for two, three and five years. All re-appointments

are for five years.

This (indicating) is our Central Maintenance Shop -- or one of them. We have five on the Turnpike. This is the central shop, at Haightown.

MR. COLLINS (Secretary): The paving is done by contract?

MR. ROSE: The repair work is done by our own people, but if it is a big job, it is done by contract.

You need all kinds of mechanical equipment, and a wide variety of mechanics, such as tool cutters, painters, electricians, radio technicians, and people of that sort.

We had an unusually large volume of traffic during the hurricane, because many of the localities were flooded, but we had no trouble at all.

We have both a central drainage, and side drainage system.

MR. AULD: Yes, I noticed the drainage on the sides as we came along.

MR. ROSE: That is right. And we also have it in the centre.

Here (indicating) is one of the engineers on the Turnpike. They all have their flags, so they can be easily seen and recognized.

This (indicating) will be the connection into Pennsylvania, unto to Pennsylvania Turnpike.

We hope all the widening will be finished by the end of this year.

This (indicating) will be the high-speed connection with the Pennsylvania Turnpike.

We have \$185 million worth of work underway now. We are paving all the shoulders, because the motorists will not pay any attention to the white lines on these curves.

We are building a new approach which you will see on your right, which is the approach to the centre span opening.

---At this point, the bus entered the Pennsylvania Turnpike, at which point Mr. Rose left the Committee.

- - - - -

---Upon arrival at Harrisburg, the Committee adjourned to reconvene on Friday, October 21st, 1955, at 10:00 o'clock, a.m.

- - - - -



P R O C E E D I N G S

OF THE

SELECT COMMITTEE APPOINTED BY THE
LEGISLATURE OF THE PROVINCE OF ONTARIO,
TO ENQUIRE INTO AND REPORT UPON MATTER
IN CONNECTION WITH TOLL ROADS IN THE
PROVINCE.

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Mr. D. J. Collins, Secretary.

VOLUME VI

Friday, October 21st, 1955.
Harrisburg, Penna., (U.S.A.)

R. C. Sturgeon,
Official Reporter,
Parliament Buildings,
Toronto, Ontario.

S I X T H D A Y

Harrisburg, Penn.,
Friday, October 21st, 1955,
10:00 o'clock, a.m.

1990 1991 1992 1993 1994

The further proceedings of this Committee reconvened pursuant to adjournment.

PRESENT:

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Messrs. Auld,

Mackenzie,

Sandercock,

Yaremko, Q.C.,

Root,

Jolley,

Manley,

MacDonald,

Mr. D. J. Collins, Secretary.

APPEARANCES:

Mr. W. J. Fulton,

Director of Planning,
Ontario Department of
Highways.

Mr. W. Q. Macnee,

Traffic Engineer, Ontario
Department of Highways.

Pennsylvania Turnpike Commission

Mr. James F. Torrance, Secretary and
Treasurer.

Mr. David E. Watson, Member.

Mr. Joseph J. Lawler, Secretary of
Highways and
Member ex-officio.

Mr. Gerard B. Gilbert, Assistant to the
Commissioners.

Mr. Henry D. Shenk, Assistant to the
Commissioners.

Mr. W. J. Roberts, Comptroller.

Mr. R. B. Stone, Chief Engineer.

Mr. J. D. Paul, Assistant Chief
Engineer in Charge
of Construction.

Mr. P. J. McNeill, Director of Finance

Mr. E. J. Urban, Public Relations
Staff.

Mr. R. J. Harper, Assistant Con-
struction Engineer.

- - - - -

MR. SHENK: Chairman McSorley regrets he
is not able to be with you this morning, but he is
unavoidably detained.

Mr. Torrance is not here at the moment, but
he will try his best to be here a little later on.

Two other members of the staff are not here
yet, but we might go ahead and get started.

MR. ROBARTS, Q.Q: Gentlemen, we are an appointed

Select Committee of the Provincial Legislature of Ontario. We are purely a fact-finding Committee. We have no executive power -- if I can put it that way. We will, in due course, make a report to our government, which it can accept or disregard as it sees fit.

Our terms of reference are very broad, that is, to investigate all phases of toll roads, and we are running into some problems you people ran into some years ago with congested highways and increased automobile registration.

We have no toll roads in our province at the present time, and we are investigating the whole situation with perhaps the idea of introducing a toll-road system.

We have with us, Mr. Fulton, the Director of Planning, of the Department of Highways, and Mr. Macnee, the Traffic Engineer.

We also have a reporter with us, and if in the course of our discussions, there happens to be anything you wish to say, but which you may not care to have reported for posterity, just signal our reporter and I am sure he is very discreet.

MR. SHENK: If you would like to have a photograph taken, we could do that now before the meeting really commences.

THE CHAIRMAN: If we could take these envelopes (indicating) with us; no doubt they contain a great deal of information, and we would like to digest it further, at our leisure.

MR. SHENK: That may be done, of course.

---Photograph of the group taken.

MR. SHENK: Of our group, Mr. Gilbert is not here as yet, but I am here, Mr. Roberts is here, Mr. Stone, Mr. Paul, Mr. McNeill, and Mr. Harper, whose name is not on the list. Mr. Urban will be in, in just a few minutes.

MR. ROBARTS, Q.C.: I think one of the first things I should do is to tell you that we are deeply grateful to you for meeting with us today. It is a very involved problem, and we know nothing about it whatsoever, and, as I say, we are indeed very grateful for the opportunity to speak with people like yourselves, who have a very broad knowledge of problems of construction, financing, and so on.

If I may suggest, if you could give us some of the history of why this Turnpike was created, how it was created, and a history of its operations, and perhaps some information in regard to financing, it would be helpful, and if we could have the opportunity of asking questions as you go along, I think it would

follow in natural sequence.

MR. SHENK: Both Mr. John Paul and Mr. Stone have been with the Commission for a number of years, and they are privileged to "carry the ball" from here on in. ---Mr. J. D. Paul, assumed the gavel, and acted as Chairman of the meeting.

MR. PAUL: May I say this, before I start to say anything else? There is a certain amount of data contained in these folders which will tie in exactly with the historical background, about which you have been speaking, Mr. Robarts.

Perhaps our best approach here would be to make it very brief, and you can "fire" questions any time you feel like it, because there are a number of answers provided, as well as some outline of history.

I do not know that we can add too much to that, except to bring this subject out for discussion.

Mr. Roberts, perhaps you would like to start off.

MR. ROBERTS: In 1946, the Commission was not formed, but the State Highway Department had a project for building a toll road, utilizing an old railroad bed, which was abandoned. This railroad had seven tunnels approximately completed.

The present system through the Allegheny Mountains to Pittsburgh went over the mountains, and

the roads were not modern in that respect, and it was thought that parts of this railway line, partly graded, and some of the tunnels, could be used.

Our first task was to survey the old railroad, to find out how it would fit in. A report was made to the Legislature after we had surveyed it, and the tunnels.

The Department wanted a 3 percent. grade line. Most highways at that time were from 6 percent. to 7 percent. grade, and we found that by utilizing the old railroad grade -- which is about 1 percent. maximum -- it would be a feasible project.

So our report was made to the Legislature, and they acted favourably on it, and the Turnpike Commission was created.

From there, we made further surveys, and further investigations, and utilized seven of the nine tunnels, and the first 160 miles of road was financed and built in a period of about 24 months.

From there on, the Legislature, from time to time -- and I may be repetitious there --

MR. SHENK: Yes, the chronology is there.

MR. ROBERTS: From time to time, the Legislature of Pennsylvania created new Acts, and new authority to extend this road.

We built 160 miles first, and then 100 miles to Philadelphia, 67 miles to the Ohio line, and then 32 miles of the Delaware River branch, and we are now building 110 miles north to Scranton, and there are other projects authorized by the Legislature as soon as they become feasible from a financial and engineering standpoint, and we expect to build them. That is a brief history.

MR. ROBARTS, Q.C.: What is the make-up of it, and how is it constituted?

MR. SHENK: It is constituted by an Act of the Legislature. The Commission is a body originated by the General Assembly to provide for a Chairman and four members, and they elect their own Chairman. The Secretary of Highways is ex-officio a voting member, so that makes a Commission of five men.

They are on salary, the Chairman's salary is \$15,000 and the members get \$13,000 each.

One acts as a Secretary, and another as Chairman of Public Relations. They always function as a Commission; never as individuals. Every matter of policy is discussed and determined by the Commission, not by the individual members.

They are appointed -- and confirmed by the Senate -- for a period of ten years, and the members

are dovetailed, so there are always several hold-overs familiar with the work of the Commission.

MR. ROBARTS, Q.C.: Are they eligible for re-appointment?

MR. SHENK: Yes. They can have as many terms as they may be appointed for. But you realize we elect a new Governor every four years, but they can succeed themselves.

MR. ROBERTS: You did not mention the Highway Department.

MR. SHENK: The Secretary of Highways is ex-officio a member of this Commission, and we have had very fine liaison between the Department of Highways and the Commission, from the beginning. I think they found the Turnpike and its facilities reduced in large measure the worry that perhaps it was an expense on the taxpayers, and we have a splendid feeling of co-operation between the two groups.

MR. MacDONALD: What is the explanation for Pennsylvania's early entry into the toll-road field? Was it the population congestion?

MR. SHENK: We had a mountainous barrier in the state, with the Alleghenies, the Appalachians, and seven ranges, and this state, with the exception of one railroad, was practically divided as far as

surface transportation was concerned..

The need was there, and this railway, of which Mr. Stone spoke, was contemplated years afterwards, but that project never materialized, and, as he stated, the Turnpike Commission originally bought that railway. I think they paid \$10 million for it.

MR. STONE: No, it was \$4 million.

MR. SHENK: For something which was valued at \$10 million.

MR. STONE: For all rights, title and interest.

MR. SHENK: So the building of the first 160 miles was almost a "must", if the Department of Motor Vehicles was to attract industry. It immediately started to pay for itself, and we are considerably ahead of our schedule, as far as the retirement of bonds is concerned.

MR. MacDONALD: Would it be fair to say it was a geographical condition, rather than congestion?

MR. SHENK: We made a railway into a highway, and we are connecting urban areas on either end.

At the time this was constructed, it was the means of providing employment for a good many men who were out of work at that time -- in 1936 and 1937.

The Commission received a grant from the Federal government on the P.N.A. basis, that is, the

Federal government furnished funds to the Commission for the payment of wages and contractors who were the successful bidders on the original Turnpike, and that grant was in the order of \$29 million.

The balance of \$44 million was an R.F.C. loan originally.

They had no precedent; it was a brand-new idea, and they could not interest private capital in the project, so the R.F.C. financed it. If I am wrong, please correct me. But they financed it, and immediately we were in a position to sell those bonds to private capital, and those bonds were at 3-3/4 percent. and were re-financed at a lower rate in subsequent years.

That is practically the history of the inception of the first 160 miles.

The first 160 miles was such an enormous success that legislation was originated for extensions in both directions, west of the 160-mile project and east of the 160-mile project, but the financing was not started until after the war.

MR. ROBARTS, Q.C.: How many miles are there in the system now?

MR. SHENK: 300 miles in operation, and 110 building.

MR. AULD: You have a financial charge of about

\$35 million?

MR. SHENK: Of \$29 million to begin with.

MR. AULD: Plus the right-of-way you purchased for \$4 million?

MR. SHENK: As I remember, only 60 miles of railway in the original 160 miles was used. The balance of 100 miles, I believe still belongs to the Commission.

MR. STONE: It is a very narrow strip. Our line used 3 percent. grades wherever we could to shorten it in a number of places, and where the railroad went around, we cut the elevations.

However, we did use seven of the nine tunnels. That was a great saving.

These tunnels were partially bored, some of them almost nearly complete, but we had to go in and widen them, but we did use seven of the nine tunnels in the system.

MR. SHENK: I presume you came from some location down here to Harrisburg by bus?

MR. ROBARTS, Q.C.: We came on your Turnpike, at the intersection at number 29.

MR. SHENK: You came through a section of the state that is comparatively level and flat.

MR. ROBARTS, Q.C.: Yes, we questioned the

driver about that, because we were interested in it.

MR. SHENK: The real engineering was on the first 160 miles, and some extensions.

MR. ROBARTS, Q.C.: That is all west of here?

MR. STONE: Yes, between Harrisburg and Pittsburgh.

MR. MacDONALD: What are the points between which this 160 miles runs?

MR. SHENK: Between the Irvine Interchange, and the Carlyle Interchange.

MR. PAUL: Geographically, we have the centres of manufacture and industry in the eastern side of the state. In other words, Pittsburgh and Philadelphia are tremendous centres of activity, from which great volumes of goods are moved, and to which great volumes of supplies have to flow. It has been that way for, I guess, more years than I would try to recall.

The routes of travel began with the east and moved west, and as it moved west, it took two courses; one course was the most direct, which is known as "Route 30" or the "Lincoln Highway", and crosses the mountains, with the best grades the "early birds" could build, I gather.

They were all steep, some with 28 percent. or 29 percent. grades in some cases, and were not

advantageous to motor transport.

As things got to moving faster, it became more of a burden to go that way.

The other route was what they called the "water level route", or the "William Penn Highway", now Route 22. It is a longer highway, where the grades are a little better.

So transports then had a choice of either taking the long route, with relatively flat grades, or the short route with very steep grades, neither of which was desirable in terms of time, which is one of the things the motor transports found necessary to find results.

So the growth of the Commonwealth, plus the growth of motor transports, all pointed up the necessity for something to tie in these two centres much more adequately than the existing highways were doing.

Since the modification of existing highways would have been tremendously expensive at that time, and even now would be, possibly to the same degree, but some relief has been afforded by the Turnpike since it was built.

So the necessity was there. A great number of people did not realize it as such, and it proved itself very quickly. I really believe, aside from

the interruption brought about by the World War, that construction probably would have continued without any gap.

MR. SHENK: We have enabling legislation now to run the so-called extensions northwesterly and from the city of Erie southward, and to the West Virginia line.

Another project is to connect the New York Thruway across Erie County to Ohio. That has been approved by the Secretary of Highways and the Governor.

MR. PAUL: There is one rather amusing thing which is a matter of background history, which might not appear here.

This state had a toll road in the early 1800's. There were a number of separate companies developed all over the state. It was about 100 years too soon, and they all failed, and the bond holders lost some percentage of their money.

So the words "toll roads" were pretty much anathema around here, and it was one of the toughest things which had to be overcome in selling the project to any taxpayers in Pennsylvania, because a good many people had some of those bonds which their fathers and grandfathers gave them, as souvenirs to stick up on the walls, and they were not very pleasant reminders, when an attempt was made to finance this.

So the biggest difficulty which had to be overcome to get the project off dead centre was to find some money someplace.

MR. ROOT: Does the state back your bonds?

MR. PAUL: The state backs nothing. The financial integrity of the state is not involved at all.

MR. STONE: After the bonds are paid for, the entire system goes back to the State Highways, free.

MR. ROBARTS, Q.C.: That is part of your legislation?

MR. STONE: Yes. It is not a private money-making scheme, but will pay off the interest, and when it is paid off, it goes into the Highway System.

MR. AULD: Not even toll to pay maintenance?

MR. STONE: What will be done then, we do not know.

MR. ROBARTS, Q.C.: It was the R.F.C. which permitted you to build it first, and then the monied interest had an example of something which was successful, and the present financing system was set up.

MR. PAUL: That is right.

MR. AULD: It seems to me your rates on commercial vehicles are a little higher.

MR. SHENK: I do not think they are comparable. They have a system of charging for New York registrations

on a flat basis, annually. I am not too familiar with the rate on commercial vehicles from out of the state. But I am of the opinion, from what I know, that we are less per mile of road in existence.

I know we are, passenger-car-wise, but our toll on commercials is either more or less than 4 cents a mile, and that is for loads up to 60,000 pounds gross.

MR. PAUL: I would like to say this very definitely for the record -- because we do not hear it very often -- that this is about the only true thing I have heard in recent years, that is, the tolls on the Pennsylvania Turnpike have never been increased. It is about the only thing in the economy of the United States which has not changed its price upward.

MR. SHENK: The 'pike was opened October 1st, 1940, a little more than fifteen years ago, and the toll has never been increased.

The rates are established on the basis of cost.

MR. ROBARTS, Q.C.: They forecast your traffic, and combined that figure with the construction costs?

MR. SHENK: Yes.

MR. ROBARTS, Q.C.: You are ahead of your amortization from the income the road is producing.

MR. ROBERTS: As a result of increased traffic, but not by the use of increased rates.

MR. ROBARTS, Q.C.: How far are you ahead?

MR. ROBERTS: I think about seven years.

MR. ROBARTS, Q.C.: On the amortization basis of how many years?

MR. ROBERTS: Forty years.

MR. YAREMKO, Q.C.: This new project; is that kept as a separate unit? Did you issue bonds for a separate project?

MR. McNEILL: The original project was 160 miles, and when they built the Philadelphia extension, they went ahead and re-financed, and got a low rate of interest.

They did the actual re-financing to secure the increased money they needed to build the Philadelphia extension. We had the right to go ahead with the western extension of 67 miles, but before we had the extension finished, or coming into being, we had to get a further bond issue for that.

MR. ROBARTS, Q.C.: They are all in the one trust agreement?

MR. YAREMKO, Q.C.: For the 360 miles?

MR. McNEILL: The 327 miles are in the one trust agreement.

MR. SHENK: We have another indenture for the extension to the bridge, and the northeast extension. We continue to collect tolls on the one which is paid

off, and amortize the other.

MR. ROOT: The road will never become a free road?

MR. SHENK: Not until all the bonds are retired.

MR. ROOT: It may never be a free road, if you increase the mileage?

MR. SHENK: Each time we get more mileage, we increase the revenue.

MR. PAUL: We may not be doing that so soon. In the first place, as the road gets older, it costs more to maintain. If you are aware of the status generally of public funds in the United States, they are hard to find.

Suddenly, if this road would become free, and the bills paid, the Commonwealth of Pennsylvania would have to accept it, and it would have on its hands the biggest "white elephant" in the world, and they would have to find some means of securing the money to maintain it to the same degree as it was maintained before. Something like that will have to happen.

I do not think it was envisioned when the original Act was enacted that when the tolls had paid for the road, it would become a state highway.

MR. MacDONALD: Personally, you doubt if it

will ever be in that situation?

MR. PAUL: It would not be in my lifetime nor that of anyone else sitting here. It is not envisioned by anybody who works on this Commission.

The economy of the thing has changed. Economic conditions in this country -- and yours also, no doubt -- have changed tremendously in the last twenty-five years, and what was envisioned as being a condition then, does not exist now, and some additional steps will have to be taken to accomplish the original purpose, unless the original purpose is modified.

MR. AULD: Could you tell us whether all the gasoline tax, and motor vehicle registration fees, and so on, are used for highways?

MR. PAUL: In this state, I think that is generally true.

MR. AULD: Is that by Statute?

MR. PAUL: Yes.

MR. SHENK: Every nickle is used for Turnpike maintenance and policing.

MR. PAUL: In addition to it being of benefit to the state in many ways.

In connection with the traffic on the Turnpike; they necessarily purchase gasoline which we supply through our concessionaires, up and down the 'pike.

They collect a tax on that, and the tax goes into the state coffers, and we do not get any of that, and it amounts to a considerable dollar value which the state can use anyplace.

Last year, there was \$1,800,000 coming to the state, which involves nothing, as far as the state is concerned, except the privilege of spending it for highways.

MR. SHENK: We pay all the expenses of the police which we use, at no cost to the Commonwealth in any shape or form.

MR. ROBARTS, Q.C.: Will you comment on the effect this has had on what we might term your "country road system", that is, the roads maintained by the state? Has it had any effect on them, either way?

MR. PAUL: You mean good or bad?

MR. ROBARTS, Q.C.: Yes.

MR. PAUL: Here is about what happens traffic-wise. Your traffic moves on the Turnpike, because it gets there quicker, and for a while there are sight-seers, and curiosity-seeking people using the Turnpike, but after all, it boils down to people who really use it because they see some dollar advantage to it.

In that period, the highway traffic seems to fall off to practically nothing. Those roads are

made parallel, but, shortly thereafter, when things begin to simmer down to the traffic pattern, the traffic on the highways picks up, and it has been doing that right along, until now, when the one or two highways of which I spoke as being routes to the west ---and which in the ordinary sense are competitive routes -- have more traffic on them than ever before.

Traffic has increased, so the benefit of mixed traffic comes in usually to us, and thus it takes the load off the adjoining competing highways.

Transversely it does add some burden to the main highways, because they are distribution centres. However, the Highway Department has kept that in mind, and has been watching these highways and improving them. In fact, they have been improving the parallel roads, so it has improved transportation all the way around.

MR. SHENK: I think we should also inject the fact that less than 3 percent. of the vehicles on the Turnpike make trips from one terminal to the other. That means of the 14,000,000 which used the Turnpike in the last fiscal period, very few of them went from one end of the state to the other.

That adds to the economic value of the highway, as it applies to centres of industry and resorts along

this route, because there is no question about it, Pennsylvania is well situated as sort of the neck of a funnel in getting a great deal of traffic from the northwestern centres and the southwest into the metropolitan area east of us, and we have siphoned many thousand more vehicles through our section than ever existed before.

For instance, consider what we had over Route 40, which runs from Wheeling to Baltimore and Washington, to the north Jersey and New York areas, and, of course, from New York state, which is considered at certain times of the year to be a "snow belt" and driving is more difficult there than down here, as we happen to be well sheltered here from bad conditions which affect highway travel.

A great many of those coming are tourists who might be using the northern routes in the summer time, but who drop down here and take this route in the winter time, so when we drop off passenger vehicles in the winter, we increase the commercial vehicles.

Of course, we thrive on commercial operations. They represent -- if I can remember the figures correctly -- about 29 percent. of the traffic, and about 70 percent. of the revenue.

MR. ROBARTS, Q.C.: It is your opinion that

these people travel on the Turnpike for a straight dollar-and-cents reason? They pay the toll, but they are still "ahead of the game"?

MR. PAUL: We can establish that in many ways.

MR. SHENK: The truckers have tested it, and ran all kinds of surveys, and we were involved in those tests.

Because of this Turnpike, a great many trucking companies have originated --

MR. STONE: It is a saving in the time element.

MR. SHENK: Yes, and the teamsters in this country are paid for the time they spend driving, so the industry finds it more economical to use the Turnpike, because there is not a grade greater than 3 percent. for 360 miles, and all curves are less than 60 degrees, so they have plenty of sight distance, and most of the large commercial manufacturers -- I mean the contractors -- are geared for this type of operation, not to exceed 3 percent. There is great value in not exceeding that grade.

MR. ROBARTS, Q.C.: Have you any information on the effect of your road on the construction industry in your state?

MR. SHENK: It has been a big help to us.

I think it is included in this brochure here (indicating).

There was one or two stories written by reporters on Pittsburgh newspapers who had an assignment from their editors to go out and see how many "ghost towns" were now existing because of the Turnpike. There was a rumour to that effect. That has been since the war.

In both stories, they reported just the reverse, that industries and everything is in close proximity. They may be some distance from the Turnpike, but bordering on it, because the facilities make it, of course, easier for production to be effected on these sections, and so industry moves out there.

We have a great flow of fabricated iron and steel between these two ends of the state.

We have a great deal of heavy industry around the Pittsburgh district in the west and some of the big fabricating machinery in the east, and we have a terrific flow of metals back and forth.

MR. MANLEY: Is that handled by truck or rail?

MR. SHENK: By truck. They cannot think of a right-of-way through Pennsylvania by rail as being practical.

MR. ROBARTS, Q.C.: Your maximum gross truck load is what?

MR. SHENK: 60,000 pounds gross; with a semi, I

think it is 62,000 pounds.

MR. ROOT: We have an 18,000 axle load.

MR. SHENK: We have 22,000 here. We will take loads exceeding that 60,000 pounds, maybe up to -- well, I hesitate to say. I will not say, because that happens to be one of my functions, and I am likely to have the engineering department "on my neck".

We charge them a terrific rate. We do not try to discourage it, but we make it pay. We charge them one penny per mile per thousand. That restricts them. They cannot pay it, and they have to travel under this load, and have a pilot car behind them.

MR. JOLLEY: Do you encounter any opposition from the railroads?

MR. SHENK: There was some opposition. It was a barrier we had to surmount at the time of the initial legislation, but there seems to be enough for all now.

MR. JOLLEY: Were the railroads reluctant to deal with you? When you first started it by purchasing the road bed of the railroad, were they reluctant to do business with you?

MR. STONE: No, the B. & O. and the Pennsylvania jointly owned the old railroad, and as far as I can recollect, there was no reluctance to release it.

It had something which had lain idle for fifty years. It was overgrown with brush, and the tunnels were caved in at the entrances, and falling away, and I think they were a little glad to get rid of it.

MR. SHENK: We have had several offers since for the road bed.

MR. STONE: To buy what is left, yes.

MR. MacDONALD: What is the total investment in the Turnpike now?

MR. PAUL: \$485 million.

MR. McNEILL: In round figures, about \$500 million.

MR. SHENK: Our original cost, including the tunnels, was \$485,000 per mile.

The cost of the Philadelphia extension was about \$775,000 per mile.

The cost of the western extension was slightly more than \$1 million per mile, and the cost of the extension to the Delaware River was about \$1,700,000 per mile.

MR. AULD: The Delaware River extension would be a competitive job?

MR. SHENK: No.

MR. PAUL: It did not quite work that way.

MR. SHENK: That is a heavily-populated part

of the state.

MR. ROOT: Have you ever worked it down to the average cost?

MR. PAUL: The question of costs cannot be fixed very well by a rule of thumb, because it is based on a good many factors.

In the first place, there are two primary things which help you to get through.

Perhaps a Turnpike such as ours is nothing more than a business, and there are business men whom you have to protect as well, and you start with nothing except some energy and ideas, and the people loaned you some money, and they want it back.

You have your plans, and it is fundamental with respect to the construction industry, that the industry needs your work to balance out its activities. Then you will find that, comparatively, you will get a lower price at that time than you would at almost any other time, and get a lower price on that work than you would on comparable highway work which might be bid at the same time.

That has been our experience. Fortunately, we have been able to get our work out for bidding at a time when the construction industry was sort of looking for work. If you are fortunate enough to hit

that sort of a situation, whether it is construction, or materials, or a combination of both, your situation is most desirable.

If you are unlucky enough to hit the other cycle, your costs will have to be weighed against that condition.

MR. MacDONALD: And you have held your luck consistently in the last ten years?

MR. PAUL: I do not know. I cannot attempt to say so, and I do not think I can conscientiously say that we have planned these things to hit these slumps. But that is actually the way it was.

We started with the construction industry being in a slump, and except for the war years, about every two years we are building something new. It all fits in somewhere, and we have been fortunate in that respect.

That is an economic factor for which we take no credit at all, but it has happened, and it has been very beneficial. In many cases, contractors will bid themselves out of business by doing things like that, but it has not happened too often in our case.

The result of that would be, of course, that you could not get this work done.

I just throw that in. It is particularly

appropriate, and I want to warn you that you cannot take our costs as an average criterion, by which you can measure things, unless you are fortunate enough to hit a thing like that.

MR. ROOT: What I have in mind is how much traffic per day do you need? Say your average cost is \$700,000 per mile; how much traffic do you have to have per day?

MR. PAUL: Let us start from the beginning, and revert to the situation.

There are two things we have to know, and we have been through this struggle so many times. First, you have to have some requirements. Perhaps the inadequacies of the road system would require that a turnpike be considered from here to there (indicating). Then, after that is determined, is the estimate of the cost which might require simultaneously endeavouring to obtain figures with respect to traffic volume which you might get under these conditions.

When you have the results of these two studies put together, you would, at that time, have to think about a toll schedule. It is not our formula; it is one which the banking fraternity thinks is the best way to measure a bond investment.

Mr. McNeill, will you take it from there?

MR. McNEILL: The first thing you have to do is to determine the length of the road. Then the engineers will figure up the construction costs. They may have a traffic report from a traffic engineer. He will make a traffic count. He will get, say, 5,000 cars in a twenty-four hour period, and will probably end up with somewhere around 50,000 or 60,000 cars per day.

Then he will take that 50,000 or 60,000 cars and take the construction costs, and put something in there like 2 cents a mile, or $1\frac{1}{2}$ cents per mile, and see if he can make it work out.

Then he will pick up the main highways from the other system, and he must anticipate how many cars per day, and what percentage will be from out of state, and how many from this particular district.

Then he can estimate what the revenue per day per year is for a five-year period.

MR. MacDONALD: Do you have to get outside consultants for your extensions, to be able to satisfy the banking fraternity?

MR. PAUL: Yes. You have to establish an earning ratio of one and one-half times your bond interest requirements, and that is after everything else is taken into consideration, or it is "no deal"; they would not

look at you. In other words, they have to see what you are going to make in terms of dollars, and how they will get it back, before they let you have it.

MR. MacDONALD: What is the present income from the Turnpike?

MR. McNEILL: Around \$23 million.

MR. MacDONALD: What is the present budget of the Commonwealth for highways?

MR. McNEILL: You mean for construction purposes?

MR. MacDONALD: Maintenance and construction.

MR. McNEILL: Around \$350 million. They have 40,000 miles of highway.

MR. ROBARTS, Q.C.: What is the total registration?

MR. McNEILL: Around four and one-half million.

MR. AULD: Did you say "4,000 miles of highway"?

MR. McNEILL: 40,000 miles.

MR. SHENK: It is the greatest amount of state highways of any state in the union.

MR. PAUL: You can take all of the North Atlantic states, and it is more than all of them put together.

MR. AULD: You have, in addition, the county and township roads?

MR. PAUL: No, they do not count. There are not many county roads as such, but a majority of the balance of the highways are township highways.

MR. SHENK: You can say that every bit of the state highway system is improved. They are improving the highways.

MR. ROOT: Does the state build freeway roads, and call them "highways"?

MR. SHENK: Yes. They just started in Pennsylvania, and have about two years experience -- maybe less than that, in two stretches of controlled-access highways, one in the east and one in the west; the Lincoln Parkway near Pittsburgh, and one in the east near Allentown.

It would have some effect, no doubt.

MR. PAUL: I think perhaps we had better adjourn for a few minutes, and sort of take a breather.

---Whereupon a short recess was had.

---Upon resuming.

MR. MacDONALD: In the New Jersey set-up, they claimed--although I heard it disputed afterwards-- that the New Jersey state budget was \$20 million -- that is the highway budget. Another fellow said that was wrong; he said it was \$60 million or \$70 million, but

even with \$60 million or \$70 million, they have 100 percent. more registrations than we have in Ontario. Our highway budget is \$176 million, with one and one-half million car registrations. Yours is \$650 million, with 6 million registrations?

MR. ROOT: What I wanted to know is, has your state built controlled-access highways, and left them as free roads, which would be in competition with the toll road? If they have, how does it affect your business?

MR. PAUL: To answer the first part of your question; the Highway Department, to my knowledge, has been building limited controlled-access highways to a limited extent, none of which are competitive with the Turnpike, to my knowledge. If they are, by some stretch of the imagination, we have felt no effect of it that we can express.

You ask me to project an answer to "would it occur that way?". Frankly, I think the answer would be, "It probably would never come about".

Competitive situations like that would never come about, because there is so much demand for highways throughout, that restricted-access roads could hardly be built -- at this time at least -- competitive with the Turnpike. I do not know whether that quite answers the question.

MR. AULD: Are you reaching the saturation point on any parts of the Turnpike?

MR. PAUL: No.

MR. ROOT: The reason I asked the question is that we have already constructed controlled-access highways in Ontario. Do you think they should be brought into the toll system, or left free of the toll system?

MR. McNEILL: You would have to have new legislation to take them into the toll system.

MR. PAUL: The way the road was built would have a great deal to do with that, and whether it would be desirable or not. There have been times when turnpikes have tied in to controlled-access state highways. That occurred in New Jersey, with the Garden State Parkway, and also on the New York Thruway, when the road then in existence was built with Federal money.

There was a great deal of talk about trying to tie in the investments in the United States with the highway, which required a great deal of legislation.

A compromise was reached in connection with the toll road facilities, so you could ride free over sections of the highway.

I do not know of any place where you have any such competition of which you speak, in the eastern part

of the country. There are multiple-lane highways, as you move east toward the coast, to New York and Philadelphia, but you find them all over the place, and they are in competition with the turnpikes, and thruways, but there still seems to be adequate traffic to satisfy the needs of the toll highways. A similar facility, even if it exists, apparently has no effect on the toll roads.

In other words, the toll facility is taking up a burden which the other state highways cannot handle any more, and for which the Commonwealth or the state, cannot find funds to finance.

MR. MacDONALD: May I ask a related question there. If I understand you correctly, there has been built more recently the controlled-access highways?

MR. PAUL: That is right.

MR. MacDONALD: What is the reason for the state entering that field, if the other facilities at hand are fitting it in with the expanding turnpike?

MR. PAUL: There are places where they perhaps do other things. I am just Mr. Average Citizen talking now and not an engineer giving you an opinion.

I think there are situations where controlled-access highways have their place. I might mention one situation, which is a good place to put a road like that,

and that is, for instance, feeder roads to municipalities from the Turnpike. Let us consider Philadelphia, for example, Philadelphia being the palm of my hand, and the roads leading from Philadelphia represented by my fingers.

There are a number of roads to get in, but they are pretty well choked up.

So the city or somebody -- it is usually not the city, because they have not any money to do that -- and it falls upon the state to get that traffic into the city and back.

We have an illustration of that in the Philadelphia Expressway, which looks like an extension of the Turnpike, about in this position with respect to Philadelphia (indicating). That is a controlled-access highway.

Then we have the Roosevelt Boulevard, which comprises routes 1 and 13. They are attempting to make that controlled-access in this position (indicating).

That involves a tremendous amount of cost because all of the other highways have to have their integrity maintained, and the accesses back and forth have to be maintained, without cutting anybody off, which usually results in parallel roads adjacent to the Thruway.

For that type of traffic, it seems to work, but there has been very little of that built in Pennsylvania, because there are so many things now.

Pittsburgh is another area, affected in about the same way. You have the Lincoln Parkway which, in part only, is considered a limited-access freeway.

MR. MACDONALD: They are very short.

MR. SHENK: They are principally for the commuting traffic.

MR. PAUL: That is the way they are placed in Pennsylvania. There have been none used as inter-urban thoroughfares.

There may be other places where that is desirable, but it has not been followed through to that extent. Do you know of any, Mr. Harper?

MR. HARPER: There are none of which I know.

MR. YAREMKO, Q.C.: You have the four-lane separated highways, which are freeways, but not controlled-access?

MR. PAUL: That is right.

MR. YAREMKO, Q.C.: But they are better highways than the double-lane highways?

MR. PAUL: That is right.

MR. McNEILL: You might explain how the Federal government got into the picture.

MR. PAUL: That is the only Federal-aid programme for assistance to highways. No doubt you gentlemen are familiar with that, but if not, it is a matter upon which you can get all sorts of information from the Bureau of Public Roads at Washington, or from the American Association of Highway Officials. I believe some of you people belong to that, or you can get it from the Ohio Research Council, and I think, also, some of your officials belong to that.

That information is readily available. That is, the method by which the Federal government returns to the states monies which the states have collected, and the Federal gasoline tax or excise taxes, so they, in turn, can use it to build highways in the state.

The big problem is if they let us collect the taxes, and keep them, we would get more out of them, and we would have more.

MR. ROBARTS, Q.C.: You are a "have" and the others are "have-nots"?

MR. PAUL: That is right.

MR. AULD: In Canada, we are all "have-nots".

MR. ROOT: Does the state contribute to the building of roads?

MR. PAUL: Yes, they contribute on a mileage

basis.

MR. SHENK: Right now, it is \$135. per mile.

MR. PAUL: It is getting bigger all the time. That is for buildings, bridges, and so on. I believe a certain proportion is also given to the cities. I do not know what that is.

It is probably based on population.

MR. HARPER: The state does maintain state highways. Whether the cities get any money or not, I doubt.

MR. ROOT: Has the state increased its contribution to municipal roads since the Turnpike has relieved the state of the cost of the road?

MR. PAUL: Yes, they did, but not for that reason. The costs of things have gone up, and the townships are "hollering" for more money.

MR. ROOT: If they had been compelled to build the road you are building --

MR. PAUL: I do not think they would ever have built the road.

MR. SHENK: With a 40-thousand mile situation, there would not be any through traffic given good roads.

MR. ROOT: I noticed something when driving up your Turnpike; your two roads are very close together. If you were building them again, would you put them

further apart, to stop the glare from oncoming traffic?

MR. PAUL: It is a very debatable question amongst engineers, and it relates to a great many factors. You have to look at the realistic factor when you build turnpikes, and that is the cost. That is one of the factors.

The other factor is safety, a lack of which is the cause of smashing things up, and, of course, human lives are a part of the story, because you are trying to keep people as normal as you can when driving over the Turnpike.

I think as far as it is reasonable and possible to go, that the trend is toward wider median strips, perhaps not everywhere, but, in fact, separating the roads, of course.

The state of California has done a great deal of thinking about that, and they have not reached any conclusion which would enable them to determine that median strips should be "X-feet" wide. The truth is that nobody knows. There are arguments for and against.

If it made no difference what they say in terms of cost, it might be more desirable to separate them, and let one go here (indicating) and the other go there (indicating).

If you are going through mountainous terrain and tunnels, you would have to change your thinking a bit.

We are not weighing lives against dollars. I am speaking of the realities as to how you will have to approach these things.

I believe there is some advantage with wider median strips, but I do not think anybody, as yet, knows exactly what the real advantage is.

However, I will say that a great deal more can be accomplished in training Mr. Average Driver -- and you can put that down as a personal opinion, because that is what it is -- more can be accomplished by training Mr. Average Driver in the handling of his automobile than anything else you can do.

MR. YAREMKO, Q.C.: What is your accident experience on the Turnpike?

MR. PAUL: I will have Mr. Shenk answer that question, when he comes back in.

MR. YAREMKO, Q.C.: In regard to policing the highway; I noticed in New Jersey they seem to have a very large number of state officers on the highway, per mile. I think they have 16 cars continuously in service.

MR. PAUL: On the Force now, we have about 120 police. Of course, that is around-the-clock duty --

but there are that many out there. In fact, they live out there. We have barracks on the 'pike, and they are on call at any time at all. Of course, they have their time-off period, but they are on call when needed.

MR. MacDONALD: Are they your own or state police?

MR. PAUL: They are state police. They are graded, and set up as a separate section of the state police, and are known as "Turnpike Patrolmen".

MR. STONE: And they all have their radio-equipped cars.

MR. PAUL: That is right. They operate on the Turnpike alone. We pay for everything, including their training, their salaries, food and provide them with places to sleep.

MR. YAREMKO, Q.C.: Their duties are just for the Turnpike?

MR. PAUL: Yes, their duties are just for the Turnpike. They have no other duties.

MR. YAREMKO, Q.C.: That includes criminals committing crimes on the Turnpike?

MR. PAUL: Yes. They are mostly, of necessity, vehicle offences. They will be handling car thieves, and everything else of that character.

They are on the 'pike exclusively, and have no other duties.

MR. SANDERCOCK: You say they have their living quarters?

MR. PAUL: We have built barracks, and are building more. They prefer it that way, because they do not have any lost time in getting out on the 'pike. We are paying for it, in any event.

More barracks are being built. They would rather have them. The state police are all young men; some are married, and some are not.

MR. YAREMKO, Q.C.: What is your accident experience and the number of offences committed on the Turnpike, because the two things are usually related?

MR. SHENK: You mean what is our accident experience?

MR. YAREMKO, Q.C.: Yes.

MR. SHENK: Our rate of accidents is less than the average -- considerably less.

MR. MacDONALD: What is it per 100 million miles?

MR. SHENK: It is in the package there (indicating). I cannot give the exact figure. I think last year it was -- well, to tell the truth, I cannot tell you. I think it was 4.5.

MR. MacDONALD: What is the explanation of that being about double the experience on the New Jersey Turnpike?

MR. SHENK: They do not have the same type of traffic we have. We have a preponderance of commercial vehicles, which may have an effect.

In addition to that, we have a section of the Turnpike where the altitude is pretty high.

MR. STONE: We go up to about 2,300 feet in the tunnels, and for about twenty miles are about 2,000 feet above sea level.

MR. SHENK: That represents a terrific change in atmospheric conditions up there.

MR. STONE: New Jersey is level land, while we go up and down the mountains to some extent, and we have to have a great many curves.

MR. SHENK: And the New Jersey Turnpike has no ice trouble at all. Never did they have any trouble, as I understand it.

That is our primary trouble on this Turnpike, ice and the accumulation of sleet, and the rapid changes in climatic conditions, and the weather.

MR. PAUL: It is pretty hard to associate one Turnpike with another in that respect.

I can point to one situation which is somewhat

typical on the New Jersey Turnpike, which is still worrying them, I believe. That is what they call the "multiple accidents", or "chain reaction", where ten or fifteen cars pile up.

To my knowledge, we never had anything like that. We might have one on a real icy day, where two or three cars would be involved, but nothing like the repetition of that type of accident.

You wonder why? Well, why are people human? I do not know.

This is what you might call "cross-country traffic". Did you notice any factories after you left the eastern part of the state to drive here? This is one of the biggest industrial states there is, and we by-passed industry to get our road out into the country.

A great deal of our traffic is not industrial traffic, except as it may be by truck traffic near the heavily-populated centres, such as you find in New Jersey.

There is a certain amount of environmental change there in the habits of people, where they are coming from, where they are going, and whether they are on vacation or on business. Are they accustomed to driving close behind somebody else, or just out for a

Sunday drive?

In the metropolitan areas, you get on any of the freeways in the state, and you will find them travelling at 40 or 50 miles an hour right up against each other. You could not put your hands between the cars, but somehow they manage to get out of that. Why? I do not know. They must have trained themselves to do it. These people are accustomed to it. On the New Jersey Turnpike, they will ride right up the other fellow's back. It scares us to death.

That sort of thing just does not work the same way here. What brings it about? I think it is some environmental condition involved there. There is a certain amount of driver experience involved, too. So you must know your own traffic, and you cannot predict anything in advance.

MR. SHENK: Another reason might be that we have them for longer periods of time than on the New Jersey Turnpike.

MR. MacDONALD: Have you the average figures for travel on the Turnpike?

MR. SHENK: That is also part of the estimates here (indicating). I think our average trip -- commercial-- is slightly above or slightly less than 100 miles.

MR. ROBARTS, Q.C.: The officials of the Garden

State Parkway -- they have the problem of a combination parkway and freeway -- told us they have not just put in these barriers to collect tolls, but have located them not only to collect revenue, but to break the trips. In other words, a man has to slow down and go through a gate every so often, and it breaks the pattern of his driving.

MR. STONE: They have them every five or six miles.

MR. ROBARTS, Q.C.: They have nine of them in 168 miles. That is a possible correction for the condition you describe.

MR. PAUL: There may be some truth in that, but how much can you build into a turnpike to warn a driver against his own poor actions? How far should you go?

Engineering-wise, we think we have everything in the highway to make it safe, but there should be some ability on the part of the man behind the wheel.

There has been very recently considerable activity -- within this past year -- in the National Safety Council to develop new slogans, which appear now and again, and which you may have heard if you have listened to the radio or watched TV.

One is "You are your brother's keeper". That

is a new wrinkle, but there it is.

Then again, some of our school officials, on a voluntary basis, in co-operation with motor clubs, have taken into their curriculae, the teaching of youngsters how to drive an automobile.

I do not know what the extent of that curriculae is, or how much you have to know, but actually you do not have to be too smart to pass a driver's test, and up to a few years ago, all you needed for a license was the price in any state.

If you are willing to license people to carry guns to that degree, without asking any questions, maybe there is some similarity there. They are both deadly weapons, if you have the wrong men behind them.

MR. MacDONALD: Have you any experience with what I have heard called "driving myopia"?

MR. PAUL: This might be a good place, Mr. Shenk, to give these gentlemen some information respecting the very thorough study we have made, and are still making, on what causes accidents.

We have Volume 1 only, which has been distributed very broadly. The other, which is the second volume, is not entirely completed.

It goes into all phases of driver philosophy, and you would be surprised, if you read that. I think

it might be a good idea to let you gentlemen have a copy to take back with you. I will not even comment on it, except to say that the remark I made a while ago -- which was a personal one -- was that the cause of accidents is certainly individual, and that is the point on which the report concludes. You had better start training the people to drive cars. It is about time something was done in that respect.

MR. ROOT: Have you places on your Turnpike where a driver who knows he is becoming fatigued can pull off the road?

MR. PAUL: We have a number of driver station restaurants, where he can get anything he needs for his normal comfort. They are placed about 25 miles apart, and there is parking space for the cars, where a driver can rest and get something to eat, and listen to some music if he wants to while eating, and where they can wash their faces, and a few other things. They are all well appointed and comfortable.

A driver can stop on any other portion of the highway, if he likes, but we do not care about it because it is not a safe practice.

MR. ROOT: But you do not prohibit it?

MR. PAUL: We do on some portions of the Turnpike, where there is to be no parking on the highway,

except for repairs. It is too hazardous.

MR. YAREMKO, Q.C.: You have a speed of 60 miles an hour; do you have any speeding offences?

MR. SHENK: Yes, but I do not think they are any greater than the average. I think our police have originated and developed a system of education on the Turnpike.

In many cases, where the speed might be excessive, but the driving is good, they will stop the vehicle and inform the driver that he has been speeding, and give him a warning. They tell him they observed ^{limit} he was exceeding the speed, but his driving was alright, but they caution him, and tell him not to speed.

The charges for speeding are in proportion to charges elsewhere.

As I say, in many instances, it is a warning. The police have an educational programme "E and E", educational and one other. They call it the "E and E Report".

If it happens to be a commercial operator, they will send to his company a copy of the violation as they observed it.

The peculiar thing about the Pennsylvania law, as it applies to the operation of trucks, is that the driver, of course, is the one who is penalized. He

receives the summons, or is fined if he is charged with a violation.

The owner of the truck or the company for which this driver may be operating, would never have any knowledge of it at all. That is one of the peculiarities of the method in Pennsylvania.

On the Turnpike, if that same thing occurs, we inform the trucking company of the habits of this particular driver, and keep them posted. They, in turn, co-operate to the 'nth degree, through their association.

They have, at all times, not less than six safety cars on the Turnpike, watching the operations of their drivers.

We have some operations which run as high as \$4,000. a month in tolls, and you can well imagine that management will be very careful about the conduct of their drivers while using the Turnpike.

In addition to that, we have our own, and we issue summonses to the drivers, or if they are arrested, the company receives a notice of the violation.

On the other hand, I do not think it is a preponderance of commercial operators who are doing the wrong things. As a matter of fact, they are very good drivers. They may become involved through no fault of their own in many instances.

I happened to read a letter this morning from a truck driver who had been driving between Pittsburgh and here on the Turnpike for the last ten years, and he is making certain suggestions, and is a bit critical of some of the ideas which have been expounded up to this time in improving accident conditions on the Turnpike. He does not think some of them are so good. But he is voicing his own suggestions, and his reasoning is rather good.

He thinks that most of the accidents which occur can be decreased by education, that is, educating the drivers.

He believes we are training a new generation to drive on this type of facility. Fifteen or twenty years ago, he said, it was rather unique to drive 40 miles an hour in automobiles, and there were quite a number of crashes in those days, not only because of the limitations, mechanical-wise, but also the limitations of the drivers.

Then we are getting better automobiles, and they go a little faster. There is a limit to what the average man can take, so far as reaction is concerned or his ability to drive.

It is a very sensible letter, and he is a truck driver.

We also get many good suggestions from the unions.

MR. ROOT: I notice that the trucking end is a large part of your business. On one of our stops, an authority said a trucking company claimed the saving on its insurance rates more than compensated for the toll?

MR. SHENK: By using the Turnpike?

MR. ROOT: Yes.

MR. SHENK: More than compensated for the tolls?

MR. ROOT: Yes. Have you any experience on that?

MR. SHENK: No, not that I know of. We know that the insurance carried on commercial loads increased the use of the Turnpike.

MR. ROOT: You do not know of any adjustment of rates?

MR. SHENK: No, I do not know anything about that.

MR. MacDONALD: There is one situation which has interested me this week, and that is really a question. I want to expound it in hope that some of your financial experts can throw some light on it.

In Ontario, with 5 million population, and one and one-half million registrations, our highway

budget has trebled in three or four years to \$176 million now.

We were very much interested to learn that in New Jersey, with a population which I have forgotten for the moment, but with licenses registered 50 percent. or 60 percent. more ,that the state's contribution to highways, we were told on one occasion was \$20 million, but we were told afterwards that was wrong, that it was \$60 million or \$70 million, and here your budget appears to be more realistic, namely, \$350,000,000, but with 6 million registrations.

Have you any comment on that kind of a disparity which appears between New Jersey and Pennsylvania?

MR. SHENK: It is the diversion feature in New Jersey. No portion of our fund is diverted for other purposes. The fees paid for the licensing of vehicles, the drivers' fees, the taxes on fuel and such things, are all used for one purpose alone, that is, for highways.

MR. MacDONALD: Is there anything more put into the highway budget from the consolidated revenues?

MR. SHENK: Yes. Of course, the state has a rental, but it comes out of the highway taxes.

MR. PAUL: We get Federal funds here, too.

MR. SHENK: Sure. They all get Federal funds.

The manufacturing and gas tax goes to the Federal government, and, of course, the states receive proportionately what the Federal government feels they should have.

MR. HARPER: They have a formula for the population, mileage, and rural mail delivery routes.

MR. YAREMKO, Q.C.: The money is spent by the state? For example, New Jersey would be affected by the amount which they would get from the Federal Government, because they are not spending their own money.

MR. HARPER: You have to have a certain amount of money. Here you have not the money to match it, and we do not get it.

MR. SHENK: In Pennsylvania, every nickle is used by the state for highway purposes.

MR. HARPER: That is the law.

MR. SHENK: Yes. There have been repeated attempts made to break the law, but they have never been successful.

MR. PAUL: It might be interesting to know that, at least in the opinion of a number of people in Pennsylvania -- and you hear it so many times that the average person would expect it to be true -- even with the budget Pennsylvania has, it does not get enough money in its coffers to build highways which need to be

built and fix those which need to be repaired. So whatever is being spent is not nearly enough.

MR. HARPER: They spend in this state something around \$6 million or \$7 million for snow removal alone.

MR. ROOT: Did I understand you to say the Federal government build them, and have the responsibility of maintaining the roads?

MR. HARPER: That is part of the formula they use in working out the amount of Federal aid. Why they feel that way, I would not know.

MR. ROOT: Is that for construction or maintenance or both?

MR. HARPER: It is for construction and maintenance, both.

MR. YAREMKO, Q.C.: Your last issue for the northwestern extension; what were the bonds issued in that connection?

MR. HARPER: That was the northeastern extension.

MR. McNEILL: About \$230 million.

MR. YAREMKO, Q.C.: Was that subscribed by public buyers, or big institutions?

MR. MACKENZIE: I did not just "catch" that. What is the state contribution to township and county roads? Is it 50 percent.?

MR. HARPER: On township roads, it is \$135. per mile.

MR. MACKENZIE: It is not possible for the township to spend so much. Would they pay one-half the cost?

MR. HARPER: It is \$135. per mile.

MR. MACKENZIE: What about the county roads?

MR. HARPER: The counties will get funds out of the state gas tax. How that is divided, I do not know.

MR. MACKENZIE: Then the county divides it amongst the townships?

MR. HARPER: No, the state pays it directly to the townships. It is used for the construction of bridges. Some give it out for county construction, and some give it out in another way. Each has its own way of doing it.

MR. MACKENZIE: What is the contribution of the state toward township and county roads?

MR. HARPER: Each county gets a certain amount.

MR. MACKENZIE: How do they work it out?

MR. HARPER: I do not know. I do not believe there is any requirement that it definitely has to be spent for roads. It is some proportion of the gas tax.

MR. COLLINS (Secretary): Sometime ago, you made the remark that it was proposed by the Highway Department to build a controlled-access freeway somewhere,

and some of the taxpayers were not very happy about it.

MR. PAUL: I do not know that I said that, but I can believe under certain circumstances, that could be.

I said there have been several built in certain sections, and I used my fingers as an illustration to show how they were built and where, and used the illustration for comparing the construction of highways and the Turnpike.

To answer your question specifically, the construction of highways does not bring shouts of rejoicing from the adjoining populace. Or it may be the other way around.

While they are glad to get the improvement, they always find there is something wrong with what you are going to do. If they are on abutting property, they expect to be paid for what you do to them.

The average individual is very dollar conscious, and expects to be paid for any damage which may be done.

But, in the end, the average citizen thinks the highway increases the life blood of commerce which flows over it.

MR. ROBARTS, Q.C.: The New York Thruway Authority told us something interesting in relation to people. They have built the freeways just to get

traffic off the Turnpike, and into the centres of population to which it was going, and in order to facilitate that movement, they did not charge anybody. You could go off where you chose, and in order to operate their road, they have to do that.

MR. PAUL: I think in some cases that would be true. If that was the case with us, we should have the authority to do the same thing. But it so happens that our interchange locations and our turn-outs are suitably situated, so that we can tie in with the major highway intersections.

In making these connections, of course, we pay the bill.

But the Commonwealth here feels that with more traffic volume, they should have some sort of facilities on either side of the highway so that traffic can function much as it does on our Turnpike, without crossing each other, and under an agreement with them, we built that for them, and they pay us for doing it.

But if they were not in a position of being able to do that by the state of Pennsylvania, there would be considerable pressure by the Department of Highways to get the road there somehow.

If it was not feasible for them to do that, our legislation is such that we could do it, although

we have never been faced with that situation.

MR. McNEILL: In New York, the first \$400 million is guaranteed, and the state has to stand behind it. We are not in that position. We have done a great deal of construction work for the Department of Highways, in connection with interchanges, and they reimburse us for that, because we have a responsibility to our bond holders.

MR. MANLEY: Do you utilize your whole staff of engineers to do the engineering work if you attempt a project of that kind, or do you hire an engineering firm to do it for you?

MR. PAUL: To begin with, we had several of our engineers carrying out the designing, construction, and so on, but after the War years, it was determined -- for a number of reasons -- we would concern ourselves with the supervising engineers who would direct the activities, and we would employ an engineering firm to do the designing based on our standards. That is what we wanted, and it functions very well. We feel that it works out very well.

They do the designing only. We supervise the construction throughout.

MR. MacDONALD: We have been told that the advantage financially of the state backing the bonds is

about 1 percent. Would that be a useable factor in financing?

MR. McNEILL: Yes. It gets you a lower interest rate if you want to obligate the state, but you must have legislation to do that.

When you try to build one of these roads, you have to worry about the industry, each industry, real estate and everybody alone the line; but when you go out to get the state obligated --

MR. MacDONALD: Was there ever any attempt to get state backing?

MR. McNEILL: No, we do not want it.

MR. PAUL: And we could not get it anyway, because the state has very definite limitations on its purchasing ability. You can go just so far, and that is the end.

MR. ROBARTS, Q.C.: You had a very fortunate beginning, with the Federal grant, and also with the R.F.C. and Federal loans.

MR. PAUL: Fortunately, because it was the last resort. We had exhausted every other form of financing. That was the stone wall which we had to scale to get the answer on the other side. Under present-day circumstances, it would never happen. In the first place, I do not want to ever do that again.

MR. McNEILL: You might tell them about the Howard Johnson establishment. When we first began trying to interest him, he said, "No, I am only interested in restaurants in the cities". But he has been very much interested in all this ever since, At the beginning, to get him to build a restaurant out in the Blue Mountains, to him was just fantastic.

MR. FULTON: What is the revenue from your concessions?

MR. McNEILL: Around \$5 million or \$6 million.

MR. FULTON: Does it pay for the maintenance?

MR. SHENK: Just about.

MR. PAUL: We do not maintain the concessions.

MR. SHENK: I think we set aside about \$9 million for maintenance.

MR. FULTON: And you get \$5 million from your concessions?

MR. SHENK: At least that.

MR. ROBARTS, Q.C.: I think we would like to congratulate you on your service facilities, because they are certainly very productive.

MR. McNEILL: They were built according to our specifications, and will become ours in twenty-five years.

MR. ROBARTS, Q.C.: Gentlemen, I think we have

covered all the various factors which interest us.

We would like to ask you to have lunch with us, and perhaps there will be some general conversation there, or some personal conversations, and perhaps a number of our delegates will be able to get some more information, or think of other questions they would like to ask.

I would like to say once again a word of thanks to you for giving us an interesting morning like this. It has been extremely helpful to us, and will aid us greatly in making up our minds as to what we may recommend.

We are having luncheon at the Penn-Harris at 12:45, I believe.

MR. SHENK: On behalf of the Commission members, may I say that we are very sorry Mr. Torrance could not be here. Mr. McSorley happens to be out, but he sends his respects, and would like to meet you.

If, in the future, there is anything you desire in the way of further information, please feel free to call on us.

MR. ROBARTS, Q.C.: We shall be very glad to do that. We have had a very informative morning.

- - - - -

---Whereupon the Committee adjourned and reconvened at a luncheon at the Penn-Harris Hotel, Harrisburg, Pennsylvania.

---At the conclusion of the luncheon, the following proceedings were had:

THE CHAIRMAN: I wish to thank you gentlemen very much for the information you have given to us, and I must say that you have been of great help.

My special thanks are due to Mr. Paul, Mr. Shenk, Mr. Urban, Mr. Harper, Mr. Stone and Mr. McNeill. If I have overlooked anyone, it is entirely inadvertently.

We have enjoyed ourselves, of course, but in addition to that, we have accomplished a great deal this morning in talking to you, and we are very grateful to you for giving us of your time.

MR. SHENK: Mr. Robarts, and the gentlemen from Ontario: all I can add to what was said this morning at our meeting is to the effect that our Commission wishes to pay its respects to you from Ontario, and if in the future, there is any further data or information you care to have, if it is at all possible, we will be only too pleased to provide it -- anything at all within reason -- which will assist you in arriving at an ultimate conclusion in regard to a turnpike or toll road or roads in the province of

Ontario.

---Whereupon the further proceedings of this Committee adjourned at 2:30 o'clock p.m. to reconvene in the city of Toronto, on Wednesday, November 16th, at 9:30 a.m.

APPENDIX "A"

(Harrisburg, Pennsylvania)

BRIEF HISTORY OF THE TURNPIKE

The history of the world-famous Pennsylvania Turnpike dates back as far as 1837, when surveys were started to determine the shortest route across Pennsylvania.

By 1883 what had been termed the "finest series of location surveys ever made in the country" had developed into definite plans by the old South Pennsylvania Railroad to build a railroad to compete with the Pennsylvania Railroad for the lucrative freight traffic of Pittsburgh.

William H. Vanderbilt, chief owner of the New York Central, was the moving spirit behind the South Penn, and he was backed by Andrew Carnegie, who was then engaged in a freight controversy with the Pennsylvania Railraod.

Within two years, 60 per cent of the road had been graded, 62 per cent of nine strategically located tunnels excavated, and \$10,000,000 expended. However, to avoid a long and costly fight between the Pennsylvania and the South Penn, large financial interests inducted Vanderbilt to sell the half-finished South Penn to the Pennsylvania Railroad. Work was stopped and never

resumed. The right-of-way remained with the Pennsylvania and Baltimore & Ohio Railroads until purchased many years later by the Pennsylvania Turnpike Commission.

It was this abandoned railpath across the Appalachian Barrier and the unfinished borings that had been drilled into the mountains that created the opportunity and the romantic interest and speculation as to the possibility of their being used for a modern, all-weather highway.

In 1935 the Pennsylvania Legislature authorized a survey of a proposed highway from Harrisburg to Pittsburgh to be made by the Department of Highways. In a report to the Legislature dated May 1, 1937, the location surveys were approved, and on May 21, 1937, Act 211 was passed creating the Pennsylvania Turnpike Commission. The Act authorized and empowered the Commission to construct, operate and maintain an all-weather highway through the Allegheny Mountains, to acquire the right-of-way, and to construct the necessary tunnels and bridges.

The Commission was further authorized to issue Turnpike Revenue Bonds, payable solely from tolls, to meet the cost of the project. A private syndicate was formed to purchase the bonds, but it was subsequently decided that several million dollars in interest could be saved if the Federal Government would lend financial assistance. Accordingly, the Public Works Administration authorized

a cash grant not to exceed \$26,100,000 and the Reconstruction Finance Corporation agreed to buy the bonds in an amount estimated at \$35,000,000, both agencies to supply funds as needed.

The amount of the grant was subsequently increased to \$29,250,000 and the loan to \$40,800,000 in the light of revised estimates of construction costs.

These agreements were consummated on October 10, 1938. Plans and specifications for the first contract were completed immediately and were advertised on October 14th. Bids were received October 26th and ground was broken October 27th.

Twenty-three months and five days later the four-lane, 160-mile section between Middlesex and Irwin -- a miracle in highway achievement -- was opened to public travel. The date was October 1, 1950.

* * * *

The 100-mile Philadelphia Extension of the Turnpike System, linking Middlesex with Valley Forge, was created by Legislative Act 11 of May 16, 1940. Construction started September 28, 1948 and the extension was opened to traffic November 20, 1950.

* * * *

The 67-mile Western Extension, connecting Irwin with the Ohio state line, was created by Legislative Act 53 of June 11, 1941. Construction started October 24, 1949

and the extension was opened to traffic December 26, 1951

* * * *

The 33-mile Delaware River Extension, linking Valley Forge with the Delaware River, was created by Legislative Act 74 of May 23, 1951. Construction started November 20, 1952. It was opened to traffic in sections in the fall of 1954 as contracts were completed. The entire extension was in operation and in a revenue-producing capacity on November 17, 1954.

* * * *

The 110-mile section of the Northeastern Extension, beginning at a point near Plymouth Meeting on the Delaware River Extension and running to a point north of Scranton, was put under construction with a ground-breaking on March 25, 1954. This Extension was created by Legislative Act 348 on September 27, 1951. It is expected some sections of this Extension will be completed by late 1955 and that the entire Extension will be open to traffic by mid-1956.

The bridge across the Delaware River, connecting link between the Pennsylvania and New Jersey Turnpikes, is under construction and is scheduled for completion in 1956. Its financing, construction and ultimate operation are a joint project of the Pennsylvania Turnpike Commission and the New Jersey Turnpike Authority.

* * * *

The Northwestern Extension was created by Legislative Act 229 of July 28, 1953. This act authorizes construction of the Extension from a point at or near the City of Erie in Erie County, thence in a general southerly direction to connect with the Pennsylvania Turnpike System at such point as the Turnpike Commission may decide is most feasible and practicable; including a lateral extension eastward to a point at or near the New York state line....and westward to a point at or near the Ohio state line.

(Page A -VI follows)

TURNPIKE CHRONOLOGY

May 21, 1937 Creative Act #211 signed by Governor George H. Earle for original Turnpike.

June 4, 1937 Original Turnpike Commission appointed.

Oct. 26, 1938 First bids opened for original Turnpike.

Oct. 27, 1938 Ground-breaking of original Turnpike.

May 16, 1940 Creative Act #11 signed by Governor Arthur H. James for Philadelphia Extension.

Aug. 26, 1940 Preview and inspection of original Turnpike by Governor and Turnpike officials.

Oct. 1, 1940 Original Turnpike opened to traffic.

June 11, 1941 Creative Act #53 signed by Governor Arthur H. James for Western Extension.

Sept. 22, 1948 First bids opened for Philadelphia Extension.

Sept. 28, 1948 Ground-breaking of Philadelphia Extension by Governor James H. Duff.

May 9, 1949 Creative Act #301 signed by Governor James H. Duff for Erie Extension -- later repealed and superseded by Pennsylvania Turnpike Northwestern Extension Act signed July 28, 1953 by Governor John S. Fine.

Oct. 18, 1949 First bids opened for Western Extension.

Oct. 24, 1949 Ground-breaking of Western Extension by Governor James H. Duff.

Oct. 23, 1950 Preview and inspection of Philadelphia Extension by Governor and Turnpike officials.

Nov. 20, 1950 Philadelphia Extension opened to traffic.

May 23, 1951 Creative Act #74 signed by Governor John S. Fine for Delaware River Extension.

Aug. 7, 1951 One-sixth of 67-mile Western Extension (Irwin to Pittsburgh Interchange) opened to traffic.

Sept. 27, 1951 Creative Act #348 signed by Governor John S. Fine for Northeastern Extension.

Nov. 26, 1951 Preview and inspection of Western Extension by Governor and Turnpike officials.

Dec. 26, 1951 Western Extension opened to traffic.

Jan. 16, 1952 Creative Act #547 signed by Governor John S. Fine for Gettysburg Extension.

Oct. 30, 1952 First contract let for Delaware River Extension.

Nov. 20, 1952 Ground-breaking for Delaware River Extension.

March 9, 1954 First contract let for Northeastern Extension.

March 25, 1954 Contract let for construction of sub-structure of Delaware River Turnpike Bridge, connecting link between Pennsylvania and New Jersey Turnpikes.

Aug. 23, 1954 First sections of Delaware River Extension (16.6 miles and Norristown and Willow Grove Interchanges) opened to traffic.

Oct. 15, 1954 Preview and inspection of entire Delaware River Extension by Commonwealth and Turnpike officials.

Nov. 17, 1954 Delaware Valley Interchange and last completed miles of Delaware River Extension opened to traffic. This marked historic culmination of east-to-west Turnpike development as it completed 360-mile connection between Ohio state line in the west and the Delaware River border between Pennsylvania and New Jersey in the east.

Dec. 1, 1954 Opening of first 22-mile section of Ohio Turnpike and official, absolute connection with Pennsylvania Turnpike by Governors and Turnpike Commissions of both States.

TURNPIKE

CONSTRUCTION COSTS

ORIGINAL SECTION

Middlesex to Irwin (160 miles)..... \$76,000,000

PHILADELPHIA EXTENSION

Middlesex to Valley Forge (100 miles).... \$87,000,000

WESTERN EXTENSION

Irwin to Ohio State line (67 miles)..... \$77,500,000

DELAWARE RIVER EXTENSION

Valley Forge to Delaware River (33 miles) \$65,000,00

NORTHEASTERN EXTENSION

Plymouth Meeting to Scranton (110 miles).

together with the

Pennsylvania Turnpike Commission's share

of the Delaware River Turnpike Bridge....\$233,000,000

* * * *

ADVANTAGES OF THE TURNPIKE

The Pennsylvania Turnpike System meets one of the nation's greatest needs--safe and rapid motor transportation between the great industrial centers of the mid-West and the populous Eastern seaboard--through the Appalachian Mountains.

Furthermore, actual savings in money are possible for all who use it, and money savings naturally appeal to owners and operators of motor cars. This is primarily significant in the operation and maintenance of commercial vehicles.

While there are some monetary savings in the operation of passenger cars, the principal reason why such motorists use the Turnpike is because of the added convenience, safety and comfort, as well as saving in time.

The Turnpike eliminates 90 per cent of all causes of accidents--no head-on collisions, no sideswiping, no grade crossings or intersections, no striking of pedestrians or stationary objects along the right-of-way. Hazards of snow, ice and fog found on the average roads over the mountains at nearly all seasons of the year are materially lessened. The Turnpike is above established flood levels, thus assuring through travel in event of disastrous floods.

Tourists from far and near use the Pennsylvania Turnpike to see the magnificent views and enjoy 360 miles of happy motoring.

Heretofore, many trucking companies operating between the East and West have preferred to use the longer but comparatively level New York routes, completely skirting Pennsylvania, to avoid steep, mountainous grades and dangerous curves. Since the Turnpike was opened, great fleets of transport trucks that formerly avoided Pennsylvania now utilize the super-highway.

Hundred of truck concerns agree that substantial monetary savings result from use of the Turnpike in the following particulars:

1. Safe operation at higher speeds in all kinds of weather.
2. Reduced fuel cost.
3. Reduced tire cost (because of lower grades and reduced braking effort).
4. Reduced maintenance cost (because of lower grades and easy, super-elevated curves, with resultant lessening of strain on transmission, brakes and engine).
5. Utilization of lower powered trucks for the same pay load and of increased pay load for present size of unit.
6. Saving of time ranging from four to six hours per trip between Ohio and the Delaware River.
7. Reduction of accidents with corresponding savings in insurance rates.
8. Ease of passing trucks and other slow-moving vehicles provided for by extra 12-foot lane.



P R O C E E D I N G S

OF THE

SELECT COMMITTEE APPOINTED BY THE
LEGISLATURE OF THE PROVINCE OF ONTARIO,
TO ENQUIRE INTO AND REPORT UPON MATTER
IN CONNECTION WITH TOLL ROADS IN THE
PROVINCE.

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Mr. D. J. Collins, Secretary.

VOLUME VII

Wednesday, November 16th, 1955.

Toronto, Ontario.

P R O C E E D I N G S

of the

SELECT COMMITTEE APPOINTED BY THE LEGISLATURE OF THE
PROVINCE OF ONTARIO, TO ENQUIRE INTO AND REPORT UPON
MATTERS IN CONNECTION WITH TOLL ROADS IN THE PROVINCE.

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Mr. D. J. Collins, Secretary.

- - - - -
E R R A T A

Page 319, Lines 24 and 25. The figures have been
transposed and should
be changed to read:

"22 percent. of our traffic is trucks,
producing about 71 percent. of the revenue."

- - - - -

S E V E N T H D A Y

Toronto, Ontario,
Wednesday, November 16th, 1955,
10:00 o'clock, a.m.

4000 4000 4000 4000

The further proceedings of this Committee reconvened pursuant to adjournment.

三 三 三

PRESENT:

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Messrs. Auld,

Sandercock.

Mackenzie.

Yaremko, Q.C.,

Root.

Child.

Jolley.

Reaume.

Manley,

MacDona

Collins.

— 7 —

APPEARANCES:

Mr. W. Q. Macnee,

Traffic Engineer,
Ontario Department of
Highways.

Mr. R. B. Campbell,

Traffic Control Engineer,
Ontario Department of
Highways.

- - - -

THE CHAIRMAN: Gentlemen, I think we will get underway, as we have a quorum.

We have some, I think, very significant and very important information before us today, but before we go into that, I have a letter which I think I should read to the Committee, and read it into the record.

It is from Mr. R. Cary, who is the General Manager of the Drug Trading Company Limited, and is addressed to the Secretary of the Committee.

It reads as follows:

"Mr. D. J. Collins,
Secretary,
Select Committee on Toll Roads,
Room 285, Parliament Buildings,
Toronto, Ontario.

Re: Toll Roads

Dear Mr. Collins:

We are very interested in the work of your Committee and we feel we cannot sufficiently voice our opinion that a very early start should be made on Toll Roads in Ontario.

We operate a fleet of delivery trucks and we

have quite a group of salesmen and store super-visors on the highways at all times. Wages are an extremely important item of expense and when our trucks and cars are forced to spend a considerable portion of each week tied up in traffic snarls, it forces us to the conclusion that we would be much better off paying the necessary charges for Toll Roads.

The experience of organizations in the United States seems to bear out the assumption that we would be better off with them, and my personal experience last Friday evening when it took me approximately one hour to travel from Paris to Woodstock, a distance of about 21 miles, leads me to believe that a lot of time and energy would be saved by the judicious introduction of Toll Roads in Ontario.

Yours very truly,

(signed) 'R. Cary',

General Manager"

The letter was written in response to an invitation we sent to the Canadian Manufacturers Association asking them to make any submissions they wished. They, in turn, circulated their members and this letter has come to the Committee from one of the members of that Association, and I feel it should

be brought to your attention, and put into the records of our meeting.

This report (indicating) we have called "Preliminary Report on the Traffic Potential for Various Suggested Routes".

This has been compiled by our own Department of Highways in response to a request originally made by the previous Committee last April.

We have discussed the matter quite fully since that time, and I had a very brief look at this report, and it seems to me to be a very valuable piece of work.

My suggestion is, if it meets with your approval, we have Mr. Macnee -- who is primarily responsible for compiling this report -- go over it section by section. We will ask his indulgence that we may break in and ask questions at any time during the presentation, and we will take our time, as much as is necessary, so that we may fully understand the contents of this report.

(Concurred).

W A L T E R Q. M A C N E E ,

Traffic Engineer, Ontario Department of Highways, appearing before the Committee, but not being sworn, deposes and says:

BY THE CHAIRMAN:

Q. Would you be good enough to proceed with your report, Mr. Macnee?

A. This report is very preliminary. I would like that fully understood. We have had neither the time nor the staff to come up with a full-fledged feasible report, such as we saw on the New York Thruway, and what-not.

But I think the information here is sufficient to give you a fair indication of where we might consider further the idea of toll roads.

I point out on the first page, the type of data we have available. We have a great deal of data from our origin-destination surveys, which have been made through Southern Ontario. Some of the surveys are possibly three or four or five years old, and that is quite old from the point of view of traffic, but it still will give a very close approximation of what is there.

Perhaps I should point out what "origin-destination surveys" are, for the benefit of those who are not familiar with them.

We set up road blocks on the highway, and interviewed a selected sample of traffic. Our selected sample was on a reasonably lightly travelled road, where

we interviewed every car in both directions, so it is almost a 100 percent. sample.

When we got into our heavier roads, such as the Queen Elizabeth Way, we interviewed only in one direction, and when the traffic became heavier, we interviewed only every second car. We did that with a view of delaying traffic as little as possible. Even with the 50 percent. samples, you run into some delay, and the antagonism of the motorists often out-weighs the value of the survey.

We have had over one-half million interviews in Southern Ontario, which we think gives us sufficient data to speak intelligently as to where the vehicles were going, and from where they were coming.

The other section is what we call "regular volume census data". This is based on short counts taken at some 3,000 places on our highway system.

We attempt to take them annually, but quite often we run into bad weather, and we cannot take each point constantly, but I think we did get about 80 percent. each year.

That is augmented by permanent counters, where the figures were actuated on an electronic machine, which operates day in and day out. Some of them have been operating for eight years, and we have

the daily variations of traffic, hourly variations, and seasonal variations, and what is more important, it gave us an appreciation of the growth of traffic year by year.

Armed with these permanent counters, we can take the count we made in 1951, and can approximate quite closely what that count would have been this year.

We have done that enough to prove to ourselves that these estimates, based on counts in the past, are accurate within perhaps 10 percent.

So, bearing that in mind, the figures which are quoted here are rounded up to the nearest 100 vehicles, and if you think of them as being plus or minus 10 percent., we cannot say "there will be 6,023 cars over a road in a day", but we know it will be very close to 6,000, maybe 6,600, and they are approximations.

For this report, at the suggestion of the Committee, I took seven different routes.

First, there was the Ottawa-Montreal route, then the Toronto-Muskoka route, Toronto-Hamilton, Niagara area up to Kitchener, the Fort Erie-Windsor route, the London-Sarnia route, and the general route of Highway 401, which, of course, is trans-provincial.

We attempted to evaluate the data we had for each one of these routes, and the first one is from the

Quebec boundary, near Montreal, up to Ottawa.

At the present time, there are better than two roads serving that area. There is the Quebec Highway, No. 8, and Highway 17, and it is almost completely duplicated by the Trans-Canada Highway, so, in a sense, there are really three roads serving that area now.

Q. Does Highway No. 8 run through the province of Quebec?

A. Yes, it runs on the north side of the river.

Q. Where is the Trans-Canada Highway?

A. The Trans-Canada -- you will see, "17 alternate" marked in a few locations. That is actually the Trans-Canada Highway.

From our origin-destination surveys, we found there were approximately 1,300 vehicles per day going from Ottawa to Montreal, or from Montreal to Ottawa. That would be the basic traffic available to any toll facility in the area.

Ottawa serves as a terminal point, and very little traffic by-passes Ottawa, so some of these Ottawa-Montreal trips probably started at North Bay, stopped in Ottawa overnight, and then went on, so when we picked them up, we included them in the Ottawa-Montreal trips, and a majority of the through traffic

is included in that Montreal-Ottawa route.

There is very little traffic generated between Ottawa and Montreal. By that, I do not say there is nothing between those points, but there are not centres between Ottawa and Montreal large enough to generate a substantial volume of traffic, and we estimate, from our origin-destination survey, there would only be about 600 additional vehicles which would possibly use the toll facilities, which would mean that there would be something less than 2,000 cars a day.

As you will recall, on the New York Thruway, the figure of "5,000 vehicles a day" was mentioned as the point where you start becoming interested in toll roads, but here we are with only 2,000.

So it would appear there would be very little possibility of toll facilities being feasible in that area. The traffic volume was away below the capacity of the existing highways.

We estimate the roads they have there now will carry up to 8,500 cars a day easily, but there is only something less than 3,000 cars which are currently using those roads.

So it looks very doubtful if that would be satisfactory for a toll road.

BY MR. MANLEY:

Q. How do you estimate the amount of traffic that

a road will carry?

A. The basis we use is this; we feel a car will not move from its present route unless it means a saving in time or in distance. It is what we call our "assignment values". We assume that anybody who saves either time or distance -- not matter how little a saving it may be -- will use the road. The fact that they would have to pay toll, would mean they probably would have to save more time and more distance than we estimate, so these figures would probably be a little on the large side, for that reason.

A person who will only save about two minutes between Ottawa and Montreal would not be willing to spend \$1.00 to save two minutes. So these figures probably are a little high.

We obtained these figures from the origin-destination surveys, and we actually know there are so many cars a day going from Ottawa to Montreal, or from Montreal to Ottawa.

Q. My question was, how do you establish the capacity?

A. Over a period of time, by measuring the condition of the roadways and the usual traffic volume on them, we have established a set of tables which show just how much a road will carry in an hour. We have these

hourly curves for the hourly variations in traffic, and on an uncongested road, we have the morning peak hour, and the afternoon peak hour coming to a definite point, and when we get a road which is meeting this capacity, it reaches its peak hour about three o'clock in the afternoon, and levels off until about seven-thirty in the evening, and then drops down.

Knowing what the road will carry in one hour, we assume that will be the peak hour, and we know the amount of traffic which would correspond to that peak hour, for the rest of the day.

Q. You take the speed of the movement of traffic into account?

A. Yes. The pavement is taken into account; the width of the shoulders; whether the telephone poles are four feet from the shoulder, in which case it will affect the capacity. If they are eight feet distant, they will have no effect whatever.

We take the curvature into account, and the sight distance over hills, the number of commercial vehicles, because, if there are 10 percent. commercial vehicles, it reduces the capacity to about 83 percent.

All these facts are taken into account.

Q. What is the approximate speed upon which you based your capacity?

A. On rural roads, we use a speed ranging from 45 to 50 miles per hour. In urban areas, we use a speed range of about from 25 to 30 miles per hour. We cannot pin it down to any specific speed. We have to deal in ranges. There are not great variations in capacity on the basis of speed. 32 miles an hour gives you an ultimate capacity, but at 50 miles an hour it only drops perhaps 2 percent. or three percent., and going the other way, dropping down to 20 miles per hour, the capacity only drops also about 2 percent. or 3 percent., so actually there is very little difference when it comes to speed.

The difference is due to the closeness which the following vehicle will ride behind you. At 32 miles per hour, the average motorist will follow behind another car as close as one second apart. As you get up to a speed of, say, between 50 and 60 miles, they drop back to about two and one-half seconds apart.

These are very approximate figures, but it is the willingness to drive closely together that varies the capacity.

BY MR. CHILD:

Q. Do I understand that a 20 percent. drop in speed will only affect the capacity by 2 percent.?

A. Yes.

Q. And if you reduce the capacity by 20 percent. of commercial vehicles, it will drop the capacity by 3 percent. or 4 percent.?

A. Yes. It is the first few which really has that effect, and then it tapers off.

BY MR. ROOT:

Q. How does it affect your figures by travelling slowly?

A. It is a combination of the fact that they are, first of all, larger; they are wider, and they tend to fill up the lanes more.

If you have two 12-foot lanes, and have a passenger car in each one, if they are driving in the centre of the lanes, they have six feet between the vehicles.

That is cut down with the commercial vehicles, and you have what they call a "medial friction" between the two lanes of traffic, which reduces the capacity. The size is probably the most important.

BY MR. CHILD:

Q. The "medial friction"; is that because of the reluctance of the passenger cars to provide space?

A. And these commercial vehicles also. It is a sort of hesitation of a car driving between twenty and thirty miles an hour, which will have more effect than a car going over thirty miles an hour.

It is sort of a telescopic effect, one car stopping on the road, will really tie things up. When everybody is going at approximately the same speed, traffic will really move.

You set up a time space on the highway, where people get as close as one second to each other, but three seconds is preferable. When you come to a dead stop, you would actually have to be touching the bumpers, but the cars should come to a stop anywhere from six to twenty feet apart, so that you have a space between cars, which is almost astronomical, when you work it out on a time basis.

I must admit that a majority of the mathematics on capacity studies is quite a bit over our heads, but the Bureau of Public Roads in Washington, has had a staff working on this since the mid-30's, and have finally come up with a very compact little manual, with all sorts of tables, and you can work out the capacities readily, as long as you do not try to understand the mathematical processes which go into them.

BY MR. AULD:

Q. Is the figure of "1,300 vehicles a day" including both Ontario and Quebec?

A. That is based on the surveys. We covered the roads entering Ottawa, so it would include the traffic

going down the Quebec side of the river.

Q. But it would not include the traffic generated between those two points?

A. From our surveys on the east side of Ottawa, we know approximately how many vehicles are coming into Ottawa from intermediate places between Ottawa and Montreal, and we can sort of reverse the figures, knowing that Montreal is a much larger city than Ottawa, and we can estimate that there will be a portion going into Montreal.

Q. Have you made any calculation in this, and the other six -- have you attempted to make any estimate of any induced traffic?

A. No. In an area such as this, the induced traffic will be somewhere between 5 percent. and 10 percent. normally.

The point is that in this area, there is a fairly decent road from Ottawa to Montreal. The road itself does not discourage very many people in Ottawa who would like to go to Montreal. I would not say they could not do better, but it is not bad enough to discourage traffic.

When we get to the area from Fort Erie to Windsor, the roads through Southern Ontario, due to these loading restrictions, are such that there is a

tremendous amount of traffic which would use that area, but cannot just now, owing to the conditions on the road.

Another place where you will get a high induced traffic is where the roads are completely overloaded. I think the opening of the Barrie highway was a good example. There were many people going up to Muskoka, and when we completed the highway to Barrie, we induced a greater number of people to go into Muskoka. With the completion of the road, we figured the induced traffic would be higher than this 5 percent. or 10 percent.

But I have not actually included any figures on that. I do not think we would double the traffic on the basis of induced traffic, but I would have to make it two and one-half times, before I could consider it important.

BY MR. ROOT:

Q. Have you any figures to show whether the traffic is commercial or tourist, or passenger traffic, of our own?

A. Percentage-wise, there is a very small amount of commercial traffic between Ottawa and Montreal. I think that is true, owing to the fact that Ottawa is not a heavily-industrialized area.

BY MR. REAUME:

Q. How much of a saving is there in travelling

from Detroit to Fort Erie on our side, as compared to travel on the American side?

THE CHAIRMAN: We have all that in here (indicating), Mr. Reaume. Could we deal with it then, do you think?

MR. REAUME: Of course, Mr. Chairman.

THE WITNESS: The next route we considered was the Toronto-Muskoka route.

South of Barrie, we have three highways, No. 11, No. 27 and No. 400. Between these three roads, they are carrying 9,300 cars, on an average day.

I might point out it is considerably higher than that in the summer months, and considerably lower in the winter months. These figures are averages for the whole year.

With a volume of traffic of that magnitude, it seems to me conceivable that we could put in a toll facility there.

However, the capacity of Highway No. 400 is such that you would not have to take very much traffic off of No. 400, to make it an extremely attractive highway. The design, and standards of the Barrie highway are at least on a par with any of the toll roads, and higher than some, higher, for instance, than those of

the Pennsylvania Turnpike.

So I doubt if a toll road could exist along-side of Highway No. 400.

BY MR. MacDONALD:

Q. What is your average summer peak on Highway No. 400?

A. On No. 400, it runs about 60 percent. higher than the annual average. It is just shy of 10,000 cars a day.

BY THE CHAIRMAN:

Q. When you say "the traffic volume was increasing at the rate of 16 percent. per annum", does that apply to the whole stretch of the road?

A. It applies to the whole north-south corridor. That could be compared with the average in the States of 3.8 percent.

Q. Tell me this, Mr. Macnee: how long can you continue to increase at the rate of 16 percent. per annum before even the three roads which are there now are operating at capacity?

A. Except for the summer and week-end nights, there is a great deal of room for increased capacity.

The capacity for Highway No. 400 is about 25,000 cars on an average day. Both Highway No. 11 and No. 27, outside the area influenced by Metropolitan Toronto,

can carry close to 5,000 cars. So the three together could actually handle about 35,000 cars per day -- from 30,000 to 35,000 cars per day.

Perhaps I should mention in answering Mr. MacDonald, that I understand the yearly average is 33,000; in the summer it will go up, and in the winter it will go away down.

Q. But what is the summer peak?

A. Actually, we have recorded a volume on Highway No. 400 up to 30,000 per day. That would be on a holiday week-end.

The normal summer day is between 10,000 and 11,000 a day -- that is, in July and August.

Q. You mean the average day, or the average summer count?

A. It varied, because they were week-ends, and it depends on the weather, and whether it is a holiday, whether it goes up or not.

BY MR. MANLEY:

Q. You mean that is a capacity of around 30,000 cars per day?

A. It is difficult to estimate a tourist route, because you do not have a set pattern of traffic.

On commuter roads, you know that people will use it, following a certain pattern, and you can estimate

it almost exactly.

BY MR. YAREMKO, Q.C.:

Q. Does not a great deal of the traffic north of Barrie come along on the east side of Lake Simcoe, and rejoin the traffic at the top of the funnel, so to speak?

A. It is more compensated for by the fact that it relieves the road for the traffic going over to Collingwood.

BY THE CHAIRMAN:

Q. What is the mileage of that route?

A. I do not think I have it worked out. It would be about 200 miles.

Q. It is 60 miles to Barrie?

A. Yes.

Q. How many of those 60 miles are occupied by what you have referred to as the "Metropolitan Area"? Would it be 60 miles from the edge of the Metropolitan Area?

A. No, that is from Wilson Avenue. It would be only about 6 miles.

The effect of the Metropolitan Area is not noticeable on No. 400. It is on No. 11. The figures I quoted are north from Newmarket, because you have so much commuter traffic along Yonge Street, and which

cannot be computed in a figure of this nature.

Q. It is 60 miles to Barrie?

A. Yes, in round figures.

It is the area north of Barrie which is the most lucrative area for toll facilities, because the capacity of the existing roads are rapidly being passed.

We have something like 4,100 cars on the two-lane stretch, going north. The capacity of a two-lane road is somewhere between 4,000 and 5,000 cars, and the way traffic is increasing, the probabilities are it will pass that in the very near future.

BY THE CHAIRMAN:

Q. Can you give us some idea as to the induced traffic? Of the 16 percent. which you mentioned, some portion is induced traffic?

A. The majority of that is induced traffic, and it would appear to be a reasonable assumption to feel that by building a new facility, such as a toll road, this 16 percent. would continue, whereas without building it, when the capacity of the road is reached, it will drop off.

BY MR. MacDONALD:

Q. There is a question which is not related to the density of traffic, but only to the highway, and I will ask it here.

What is the explanation for the fact that Highway No. 400 has attracted so little industrial development, as compared with the highways in the United States, where, from the stories we received down there, they seem to invariably attract industrial development, and almost spontaneously so.

A. This is purely guesswork on my part. I have not the figures to back it up.

But it strikes me that Metropolitan Toronto is consolidating its roads now, and we can see, primarily on the by-pass section of 401, and also becoming apparent on Highway 400, a ribbon of industrial development.

Highway No. 400, in the last two or three years, has attracted more commercial establishments than industrial, but it is wholly built up north to Sheppard Avenue, and it looks like a ribbon development.

I think we have reached the point where it will explode at any moment.

Metropolitan Toronto is about at the saturation point, so it will suddenly burst forth.

Highway No. 401 is more attractive to industrial development than No. 400, because No. 400, basically, serves a tourist area, whereas 401 will serve the heart of the population of Ontario.

If you take a ride down No. 401 toward Oshawa,

you can see all sorts of industrial development down there.

While we cannot prove it, I think we can safely say that No. 401 has a great deal to do with this industrial development being down there.

I think it will come, but it is a little slow starting.

BY MR. YAREMKO, Q.C.:

Q. In regard to these northern roads north of Barrie: if there were better roads, would there not be a tremendous induced traffic, because most of the cars going up into the Barrie area cut off, and go into the resort area in Muskoka, and that area is becoming very densely populated, because it is easier to get to.

The further north you go, the less populated the district becomes, because it is more difficult to get into, and it seems to me if there was a better road for another fifty miles, you would induce a tremendous amount of traffic for people, and open up the resort area.

A. It would definitely open up the Muskoka region, but I feel there would be a deterring factor there, because one of the beauties of the Muskoka area is the openness of it. It is like getting out of the heat of the city and into the wilds.

It would seem to me that the more you open it, the more you will start people looking for other spots.

BY MR. AULD:

Q. As regards the induced traffic going up there; traffic would be there, but the induced traffic we heard about in the eastern States was on account of the traffic potential on both ends, whereas here it is primarily at one end.

A. We have to look at the return potential here. There is an area, to which a tremendous number of people would like to go, but rather than fight their way up on Friday night, and back on Sunday night, they simply stay home and watch TV.

Of course, once they get up there, they have to come back.

Q. It would seem that perhaps many people would want to come from Sudbury by way of Parry Sound.

A. I think the commercial operations between southern and northern Ontario are being discouraged because it is very difficult sometimes to get transports up Highway No. 11.

If we had a free-flowing facility through that area, it would remove the bottle-neck, so to speak, and it might quite conceivably induce quite a good deal

of commercial traffic to the north, which is now perhaps going some other way.

BY MR. ROOT:

Q. What part of the induced traffic is due to the fact that the road is faster and safer? The people want roads where they can travel faster, and still be safe.

A. It is the speed of operation which has really induced the traffic.

The east-west toll roads in the States have played havoc with some of the railroads, with the result that the railroads are throwing in a counter-attack by running this "piggy-back service".

Up until these toll roads were built, the railways competed very favourably with transports. What the railway companies lost in their terminal difficulties, the truckers lost in their overland difficulties, and when you take the overland difficulties away from the truckers, they are in a very favourable position.

BY MR. MacDONALD:

Q. Do you anticipate any very significant increase in traffic in this area north of Barrie, with the opening of the highway from Parry Sound through to Sault Ste. Marie?

A. Our figures seem to indicate it will not have a tremendous effect.

This new route No. 69, is undoubtedly going to carry a considerable amount of traffic, which will be primarily induced to the north.

There is a reasonably small volume of traffic which is now following Highway No. 11 to North Bay, and then cutting over to Sault Ste. Marie. But in terms of total volume of traffic, it is not exactly negligible, but it is getting very close to it.

I believe we estimated it would take about 600 cars a day off the existing route, which is really very "small potatoes".

BY MR. ROOT:

Q. How much did traffic drop on Highways 27 and 11 when we built No. 400?

A. There was a very sizeable drop. It was close to 50 percent. Unlike other routes, it has not re-developed.

For instance, when Highway No. 401 was opened up east of Toronto, paralleling No. 2, there was a tremendous drop in traffic on No. 2. But within three years, No. 2 was up where it was before, and carrying as much as it ever did.

The same does not hold true for Highway No. 400.

BY MR. MacDONALD:

Q. What was the reason for that?

A. I think one of the reasons is that Highway No. 2 -- it was right at a period when the area along No. 2 was being developed, and although there are the same number of cars now on No. 2 as there were before, they are different types of cars. Before that, it was mostly long hauls, trucks and vehicles heading for Brockville, Kingston and Montreal. Now it is nearly all commuter traffic.

They have not had the same development on No. 11 as we had on No. 2. But Highway No. 11, at the south end, is carrying more traffic than it was before.

BY THE CHAIRMAN:

Q. Can you break this down into "tourist", "local" and "commercial"?

A. Yes, we can.

Q. Have you the figures available?

A. I have not them right now. We did a survey of Highways No. 11, No. 27 and No. 400 this summer, and the information is currently being put on the I.B.M. cards.

Q. I am interested in the number who come out of Toronto, the number which have American licenses,

and the number who live in that area and commute back and forth into Toronto, and there probably will be others which are straight commercial vehicles.

A. I can give you some approximation of that.

In the summer months, the cars with other than Ontario license plates, run about 35 percent. or 40 percent.

Commercial traffic in the summer months, has a volume of approximately 5 percent.

Q. You say 35 percent. to 40 percent. in the summer months?

A. Yes.

Q. That would be a higher percentage than on a yearly basis?

A. In the winter months, the American tourists would probably be something less than 5 percent.

Q. Would the 35 percent. to 40 percent. be applicable to your average annual daily figure?

A. No, it would have to be somewhat less than that. It would be about 25 percent. of the year's total traffic -- that is, 25 percent. would be American.

Q. I think we appreciate you are only making an estimate. You have not your figures worked out as yet?

A. It would be somewhere around 25 percent.

BY MR. ROOT:

Q. And the commercials would stay about the same?

A. The commercials are fairly constant.

BY THE CHAIRMAN:

Q. You said they would be about 5 percent.?

A. Around 5 percent.

BY MR. MACKENZIE:

Q. Have you the figures for Highways No. 48 and 51?

A. We have origin-destination surveys on every road around Metropolitan Toronto. They are in process of being worked up right now.

BY MR. COLLINS (Secretary):

Q. What was the traffic volume carried on Highways No. 11 and No. 27, prior to No. 400 being opened? Was there much change?

A. The residual volume was about 50 percent. of the preceding volume.

BY THE CHAIRMAN:

Q. The Secretary suggests you have some complicated mathematical formula for bring this up to 1955?

A. Yes. Unfortunately, a lot of these figures are based on different years. I worked out some factors in which perhaps you might be interested.

The latest figures which are shown in this

report are called "annual average daily traffic for 1954".

On our commercial roads, which are typical of the roads in southern Ontario, traffic has increased approximately 7 percent. over last year.

On our primary tourist roads, which apply to this area we have been discussing, it has been up 13 percent.

BY THE CHAIRMAN:

Q. Could we go over these seven routes we will discuss, and label them "Primarily commercial" or "Primarily tourist"?

A. The first route, Ottawa to Montreal, lies somewhere between "Primary commercial" and "primary tourist", so the increase there would be about 10 percent. That would mean the 1954 figure would be increased by 10 percent. to give us the 1955 figure.

That would apply to all the other factors, too.

These factors, you will note in some cases, refer to the "July annual average daily traffic".

To bring that to the 1955 representative figure, you would multiply it by the factor which is shown here.

Toronto-Muskoka is a "primary tourist" route. Toronto-Hamilton is "primary commercial".

The same applies to the Niagara area, up to Kitchener.

The Fort Erie-Windsor route is traffic which falls more into the "primary tourist" route.

London to Sarnia is "primary tourist" route.

Highway No. 401 is primarily a commercial route.

BY MR. CHILD:

Q. You say that Fort Erie to Windsor was "tourist"?

A. The traffic which is there at the present time is "primary tourist".

BY THE CHAIRMAN:

Q. Now, can we move on to route No. 3, Toronto-Hamilton?

A. Currently, we have three highways serving that area -- three King's Highways; Highway No. 2, Highway No. 5, and the Queen Elizabeth Way.

The average volume for 1954, showed something less than 40,000 cars per day between those two cities.

Our survey shows that when Highway No. 401 is built, it will relieve both Highway No. 5 and the Queen Elizabeth Way by a reasonable amount of traffic, amounting to about 7600 cars per day. That is traffic which comes, for instance, from the Kitchener area, and prefers coming down Highway No. 8 to the Queen Elizabeth Way, rather than east on Highway No. 7.

Highway No. 401 will have little or no effect

on the Toronto-Hamilton traffic, nor the Niagara Falls traffic, because the route of the road is somewhat to the north.

BY MR. CHILD:

Q. You said it would reduce traffic by what percentage?

A. In round figures, 7,600 vehicles would be diverted from the existing roads to perhaps Highway No. 401.

Q. That is, Highways No. 2, No. 5 and the Queen Elizabeth Way?

A. Yes, there would be practically no traffic taken off of No. 2; it would be mostly from Highway No. 5 and the Queen Elizabeth Way.

I notice a misprint here. It should be Highway "No.5" instead of Highway "No. 3".

BY THE CHAIRMAN:

Q. How many do you think will be using this highway?

A. That was based on our survey of our Galt, Guelph, Brantford and Kitchener route. We know the traffic which is currently using that route. For instance, the traffic from Guelph comes down Highway No. 6 to get on to the Queen Elizabeth Way, and goes on.

We know there would be an appreciable saving

in both time and distance, if they came down No. 6 to Highway 401.

Q. Did you consider the traffic west of there? Would that be covered in those figures?

A. It is all here (indicating). Any traffic we felt would be diverted to Highway No. 401, which is currently using the Queen Elizabeth Way, is included in that "7,600".

Q. There would be a great deal of traffic diverted from Woodstock, Ingersoll, London and St. Thomas?

A. For instance, there is, in round figures, about 700 vehicles a day between Windsor and Toronto, and we feel they would use Highway No. 401, because it would be a direct route into Toronto, rather than having to fight their way down to the Queen Elizabeth Way.

BY MR. YAREMKO, Q.C.:

Q. I notice for route number 1, Ottawa to the Quebec border, you gave us the combined capacity of the roads there.

Can you tell us what the capacities of Highway No. 2, Highway No. 5 and the Queen Elizabeth Way would work out to?

A. It is actually less than what we are carrying right now. It is about 35,000.

Q. Highway No. 5, with 6,700 vehicles?

A. The practical capacity of the two-lane road, which Highway No. 5 is, is around 5,000 cars a day.

When we speak of "capacity", we are speaking of free, unimpeded flows of traffic.

Any of you who have ever driven on Highway No. 5 know if there is anything unusual, like an accident or a flat tire, traffic really gets "balled up". If it was not flowing beyond capacity, there would not be an appreciable tie-up.

"Capacity" is the ideal situation. That is what we are looking for on all our roads.

Highway No. 5, with a practical capacity of 5,000 vehicles, could carry up to 17,000.

The Queen Elizabeth Way, with a capacity of 25,000, has handled up to 57,000 cars per day.

BY MR. CHILD:

Q. It has handled 57,000 cars a day?

A. Yes.

BY THE CHAIRMAN:

Q. Even with Highway 401 entering the picture, diverting 7,600 vehicles, that would bring the total down to 31,000, shall we say, so that you are still within a very small percentage point of your capacity?

A. That is quite true.

Q. So, is it fair to assume that even when

Highway No. 401 has done this diversion, those roads are still going to be "jam-packed", so without any further induction of traffic, it will not be sufficient to carry the traffic?

A. That is quite true. There is one factor which, at the present time, on the Queen Elizabeth Way, will increase its capacity considerably. It is this business of eliminating intersections and grades. The capacity of that road is being currently increased.

Highway No. 5 can be improved. You cannot have too many grades on Highway No. 2, because of the fact that it is almost a city street at the present time.

Q. If we project our thought for, say, ten years -- which I feel this Committee must do -- on the basis of those figures, we are going to need another highway between Toronto and Hamilton, regardless of any present construction or planning?

A. I think that is a very fair assumption, yes.

BY MR. YAREMKO, Q.C.:

Q. After these intersections have been eliminated, and three or four bridges put on the Queen Elizabeth, and the Burlington Skyway, increased capacity by improving the Queen Elizabeth Way will pretty soon come to an end?

A. Oh, definitely. It will have reached the

saturation point. There is a full flow of cars, capacity-wise, in the area between Toronto and Hamilton.

Our capacities were worked out on the basis of the concentrated peak hour in the morning, and the concentrated peak hour in the afternoon, but due to traffic conditions, I suppose, more than anything else -- we call it "staggered peak hours" -- the Queen Elizabeth Way has a peak hour from about three-thirty in the afternoon until upward of seven-thirty at night. Instead of trying to jam everybody through in one hour, it takes three and one-half hours, which definitely increases the capacity.

We normally assume -- and we have lots of information to back it up -- that the peak hour represents 10 percent. of the daily traffic on a road of this nature. In this area, at the present time, our peak hour is only between five percent. and six percent. of our day's traffic.

Another situation is that we assume that two-thirds of the traffic under the peak conditions, is flowing in one direction, and one-third in the other.

On the Queen Elizabeth Way, you will find a different situation. During the entire day, there are as many cars leaving Toronto as are coming in here. So we can carry actually 5,000 cars a day on the Queen Elizabeth Way, and that represents the capacity of the

Queen Elizabeth Way, so the capacity there is somewhat higher than on the average four-lane, divided highway.

BY MR. AULD:

Q. What is the practical limit to increasing your capacity by adding more lanes?

A. On the four-lane, divided road, people are beginning to feel that is the ultimate.

As you increase the lane width, you have to increase the distance between the interchanges. A good example of that is the Hollywood Freeway, where they slip in another lane every once in awhile, and they now find they have to close some of their interchanges, and it will take passenger cars from a mile to two miles to get on the inside lane, to get off the Freeway.

We are having trouble on Highway No. 401, because the interchanges are too close together. I do not think we could widen Highway 401 because of that fact. If we were to widen Highway 401, we would necessarily have to close some of the interchanges.

The question is, which is worth the more? You need many accesses to Toronto, to the various streets, otherwise you will overload certain streets.

There are two considerations. That is the beauty of those toll roads. We have 15 miles between interchanges. Theoretically, you can make them as

wide as you want to, because in 15 miles you can weave through a great many lanes. But if you get into a road like the Queen Elizabeth Way, where you have to have your interchanges rather close together, you are pretty well forced to stay down to about four lanes.

BY MR. AULD:

Q. In other words, you are getting to the point where you will have to have two four-lane highways, one going to the even places, and one going to the odd places?

A. Definitely the thinking in the United States is to build a four-lane highway, and when that gets to a point where it reaches the saturation point, instead of widening it, they build another facility.

The basic reason behind that -- and this was found on the Hollywood Freeway -- there is too much traffic.

People using Highway No. 7 from Guelph, want to drive on the Queen Elizabeth Way, but that is too far away to be practical. So, instead of cluttering up the Queen Elizabeth Way, or building another lane into it, build another facility altogether.

BY MR. MACKENZIE:

Q. Would another highway between Toronto and Windsor help to relieve the situation?

A. Yes. We figure it will take another 7,600 cars off of it.

Q. That will be a four-lane highway?

A. Yes.

BY MR. MacDONALD:

Q. With the improvements to the Queen Elizabeth Way, what will the new capacity be?

A. It is pretty hard to say actually. It depends so much on this business of the "peak hours".

Some people feel that when we next improve the Queen Elizabeth Way, we should spread out our afternoon peak hours, or they will start clogging it up completely.

Instead of having a three and one-half hour peak period, everybody will start leaving their offices at four o'clock or four-thirty, instead of some of them closing at three-thirty, and continuing on until six o'clock.

If that pattern does not vary a great deal, I would say the capacity would be well over 35,000.

Q. Instead of the 25,000 as it is now?

A. Yes, instead of the 25,000 as it is now.

BY THE CHAIRMAN:

Q. There is a corollary to that question; how long will it take to use up the increased capacity which

will be created by the improvements? Is that a fair question?

A. I will get Mr. Campbell to work it out. It is 7 percent. a year, and we have about a 10-thousand leeway there.

I think definitely in this area it will be worthy of further study.

BY MR. CHILD:

Q. What is the total capacity of the three roads now?

A. As they stand, it is something close to 35,000, but we are carrying more than that.

BY THE CHAIRMAN:

Q. The answer to my question is, the capacity will be exhausted in six or seven years, at the present rate of increase?

A. Yes.

BY MR. ROOT:

Q. If I remember rightly, on the New Jersey Turnpike, they could carry 71,000 per day.

A. That was in the six-lane section.

Q. In one section, it went up to 100,000, and they have run into difficulty with their interchanges, and it cost the Turnpike Authority \$2,400,000 per mile.

A. They have run into a great many difficulties.

Fortunately, the Ontario motorist has not the same attitude on the road as the commuters in New Jersey, into New York City. There they practically ride on one another's bumpers.

When they say they carry up to 100,000 cars, that does not imply the road has a capacity of 100,000.

For instance, the Queen Elizabeth Way, on the Saturday of the Labour Day week-end, carried over 57,000, but I do not think that anybody who drove on it would say that is/^a tolerable condition.

By "tolerable condition", I mean enjoyable driving.

But to get to work, people are willing to put up with some things they would just as soon not have to.

BY MR. AULD:

Q. They may have to have a longer peak?

A. On the New Jersey Turnpike, they have completely thrown up their hands in despair in trying to work out peak hours.

For instance, they now find that more people are crossing into New York City during the five o'clock rush hours than are leaving New York City. They do not know why. They just do.

BY THE CHAIRMAN:

Q. Could we have that broken up by months?

A. Yes.

BY MR. MacDONALD:

Q. You make a comparison between the New Jersey and the Ontario motorists. Earlier, you said the Ontario motorists driving at 60 miles an hour, would have a distance apart of two and one-half seconds. What distance is that?

A. At 88 feet per second, that is about 200-odd feet. That is really quite phenomenal, on the basis of spacing in time.

In the United States, they have been studying the spacing of time, and they have treated it on the basis of "feet", but they could not get anywhere until somebody tried it with a stop watch, and almost every movement of the drivers is on the basis of time. The motorists now will stop right on the highway, waiting for a nine-second gap. I do not think a motorist in the world knows what a "nine-second gap" looks like.

Unless he is forced to, he will not move into traffic if there is anything less than nine seconds available to him.

When I was down there on one of my trips, I went to the Long Island Parkway, and we actually timed cars, and it was phenomenal how close it was to three seconds.

In California, they got down to a point of one second at high speed. On the Hollywood Freeway, the allowable speed is up to 50 or 60 miles an hour, and they brought it down to one second.

Ontario motorists will not do that.

BY MR. CHILD:

Q. That brings about the 18 or 20-car pile-ups?

A. I do not know whether any of you read the write-up about the teen-agers on the Hollywood Freeway, who got a dummy, and they would stand on an overpass until they saw a number of cars coming, when they would drop the dummy and watch the cars banging together.

THE CHAIRMAN: I think we will take a five minute recess at this time.

---Whereupon a short recess was had.

---Upon resuming.

THE CHAIRMAN: Gentlemen, let us resume.

Are there any further points anyone would like to bring up in connection with Route No. 3?

MR. CHILD: There is one I would like to mention, if I may.

THE CHAIRMAN: Certainly.

BY MR. CHILD:

Q. There is a definite trend, as far as industry is concerned, toward the reduction of hours. Instead of

quitting at five o'clock, they quit at four o'clock, and sometimes at three-thirty.

If there is a further trend downward, and they start quitting at three o'clock, would that not have an effect on the capacity of the roads in and out of Toronto? In other words, would not that spread the traffic?

A. The more spreading of your quitting times, the better able your roads are to carry the traffic.

MR. REAUME: Eventually, they will not spread. They will all be quitting at three o'clock.

MR. CHILD: Yes, but industry is starting at different times, too.

However, that was just a question in which I was interested.

THE CHAIRMAN: Is there anything further?
(No response).

If not, we will go on to Route No. 4.

THE WITNESS: Route 4, I have shown here, as "Buffalo to Kitchener". It could just as easily be "Niagara Falls to Kitchener". I do not think that would affect my figures at all.

Currently, between Hamilton and the Niagara frontier, we have the three roads, the Queen Elizabeth Way, Highway No. 20, and Highway No. 8. They have a

combined total volume of some 18,500 cars right now, which is well below the capacity of those roads. The Queen Elizabeth Way in that area has a capacity of about 25,000 cars in itself.

Beyond Hamilton -- between Hamilton and Kitchener-- the traffic is only being served by Highway No. 8, with a traffic volume currently of some 4,600 vehicles.

With the opening of Highway No. 401, some of that traffic -- a considerable amount -- will be diverted from Highway No. 8 onto No. 401.

With these figures in mind, it strikes us that it would be rather doubtful if a toll facility would be required in that area, or could be made to pay in that area. There does not seem to be enough traffic between Hamilton and Kitchener.

There are sections of Highway No. 8 which are carrying a tremendous volume of traffic, but that tends to be commuter traffic between Kitchener and Preston, and trips of that length do not, as a general rule, lend themselves to a toll facility.

It is rather doubtful if any further consideration should be given to that particular route.

THE CHAIRMAN: Any further questions on Route No. 4? Is there anything anybody wants to bring up about that? (No response).

Then, we will go on to Route No. 5.

THE WITNESS: Route No. 5 is the Fort Erie-Windsor route.

For the purpose of this, I assumed a straight line from Buffalo through to London, and then using the basic line of Highway 401, from London through to Windsor.

The data we have shows that there is not actually enough traffic in Ontario at the moment to substantiate a toll road. But the induced traffic -- the potential induced traffic -- is such that it seems very likely that a toll facility would pay in that area.

I think there is not enough in itself, but there is still a considerable amount of Ontario traffic which is available for it.

I have shown some examples we received from our origin-destination surveys.

Currently, between Windsor and Fort Erie, there are over 600 cars going the full length. Between Windsor and Niagara Falls, it is something just shy of 1,000.

In addition to that full-length traffic, London generates a considerable amount of traffic, not only for the long distance from London to Niagara Falls, but also for some of the shorter trips, like London to Tillsonburg

Presently, the trip from London to Tillsonburg

is quite a roundabout affair, whereas, a toll facility or a through route would amount to really quite an appreciable saving, both in time and in distance.

One point which is quite important, when we are speaking about "induced traffic" is this business of our axle load laws.

Our load laws are considerably less than in New York and Michigan, in fact, in most of the states in the United States, and some provision would have to be made so that higher axle loading would be permitted on the routes.

That is the main reason why this heavy commercial traffic is not presently going through Ontario.

We have, of course, no actual figures on this possible induced traffic, but, as was pointed out, it would mean, to all intents and purposes, a certain lessening of the distance from Chicago, going to either New England or New York cities, via Albany, Syracuse, Rochester, Buffalo, and also to Detroit, and one does not have to stretch his imagination very far to see the potential traffic there.

Information as to that induced traffic is undoubtedly available from certain American Authorities, such as the New York Thruway.

If the induced traffic is as considerable as

we feel possibly it is, the route from Fort Erie to Windsor definitely would appear to be a potential toll route. It is possibly the surest toll route in the province.

BY MR. REAUME:

Q. I was going to say that the experts, both on our side of the line and the other side, have picked this route No. 5 as being the most outstanding and the one which is most liable to pay.

A. I think it is safe to say that the people in the area of Windsor, of course, are "all for it", and when you see companies both from Canada and the United States, marching forth with plans to finance it, without any help/or obligation on the part of the people of the province, there must be something behind it, and perhaps Route No. 5 is the one to which we should give a little extra attention.

There is 120 miles saved by bringing traffic from Windsor down No. 3, and onto No. 2 into Fort Erie, than by going along the other side on an American route from Buffalo, into Detroit.

Q. How far is that saving? Is it actually 120 miles?

A. I cannot give you the actual figures, but it would be pretty close to that.

But the real saving is not so much in distance, as it is in time, because when you travel from Windsor to Buffalo, you do not run into any real congestion in an urban area, whereas if you take south of the lake, where it is almost all built up, with Toledo running practically into Cleveland, and what-not, the point is that even with our own roads, it is not inconceivable to average 45 miles an hour from Windsor to Fort Erie. But if you could average 30 miles an hour on the south side of the lake, you would be doing exceedingly well.

BY MR. CHILD:

Q. Then why do they not build one on the American side?

A. They are. The New York Thruway is being extended to the Pennsylvania line. The Pennsylvania Turnpike is building a section to the Ohio line, and the Ohio line will be extended down to connect with the Ohio Turnpike, which will take them through to Chicago, which will be a direct route, but it will be a long route, and that is the point where the mileage comes in.

I do not think the saving in mileage would be 120 under those circumstances. The 120-mile difference would be when you are going into Detroit, and going through to Chicago would not effect the same saving. It would bring into play the dip from Toledo to Detroit.

BY MR. REAUME:

Q. I am thinking of a trucking company operating from Detroit, going to Buffalo. There would be a saving of approximately 120 miles, I believe.

I was wondering also, since you mentioned bringing them down on No. 3 to a certain point, and then shifting them off on to No. 2, would it not be much shorter to stay on No. 3 all the way through, other than the fact that you want to hook them up with Highway No. 401?

A. As I pointed out, for the purpose of this, I have, to all intents and purposes, joined Buffalo and London, and then followed the route of 401.

The reason I followed the route of 401 was that although a toll route would be feasible in that area, it could not be in competition with Highway 401, if it was built --

Q. At that point, I want to ask you this question: is Highway 401 being built to handle heavy traffic now?

A. You will find that Highway No. 401 could carry heavy traffic actually, except for the local loading laws, which prohibit it.

Q. That is the only thing which stops it?

A. Yes.

BY THE CHAIRMAN:

Q. Is there not something in the actual construction

when Highway No. 3 was built, so it cannot carry heavy loads?

A. That is right.

MR. REAUME: It is more of tourist travel and a scenic route, than commercial?

BY THE CHAIRMAN:

Q. But Highway No. 401, as completed, will be able to carry anything?

A. Pretty well anything within reason. There is a legal obstacle in the case of Highway No. 401, whereas, in regard to Highway No. 3, it is a construction obstacle.

BY MR. MacDONALD:

Q. Have you any idea of what the induced traffic would be?

A. I cannot even hazard a guess. It might be either more than the road can carry, or, if the Ohio people put pressure on the truckers and motorists, it could be practically zero.

My own feeling is there would probably be a price war going on between the Ohio Turnpike and the Ontario toll road, which would induce the truckers to use one route over the other.

Q. When you say "the Ohio people would put pressure on the truckers", what do you mean?

A. Perhaps not "pressure", but there might be a one-quarter cent per mile differential.

BY MR. REAUME:

Q. If you can save a man hauling 120 miles -- I do not know what the cost is per mile for hauling freight, but it must be a considerable amount.

A. I do not think you could ever entice the Buffalo-Detroit traffic away, but taking the Boston-Chicago traffic -- the New England States to Chicago -- it would actually be far more important than it would to the people of Buffalo and Detroit.

There would not be a difference of 120 miles. There might be a difference of only 20 miles, but by "nipping" down their rates a quarter of a cent per ton mile, and making a ten-cent saving, instead of going ten miles extra -- I think it will depend on the cheapest route.

BY MR. AULD:

Q. It will depend on what stopping points they want to use. If it was important to stop at Buffalo or Detroit as part of their schedule, it might be better to go through Ontario.

BY MR. REAUME:

Q. Another point of importance is the fact that I think Detroit will be on the waterway scheme. At the

moment, it is the second largest port of entry in the United States. After the completion of the waterway, it is felt they will go up again.

So I imagine a great deal of freight will be coming into Detroit, which will have to be taken from the boats and loaded onto the trucks, and then find its way to Cleveland, Buffalo, and places of that sort.

A. Whether or not that is a point in favour of building a road between Windsor and Buffalo, I do not know.

BY THE CHAIRMAN:

Q. I think the traffic would mostly go west of Detroit. Buffalo is a port, Cleveland is a port, and Toledo is a port. So anything going from Detroit would probably be moving west, rather than coming back east.

MR. REAUME: Is Buffalo a port?

THE CHAIRMAN: I know Rochester is a port; that is, Charlotte.

BY MR. AULD:

Q. They have not the depth there at the moment?

A. I cannot say.

THE CHAIRMAN: That is something about which I do not know too much.

THE WITNESS: You can see why I would not

hazard a guess of the amount.

BY MR. MacDONALD:

Q. There was another point about which I was curious. In meeting this kind of competition, do you think, from the experience of the United States with toll roads, there has been the practice of cutting their rates?

A. Actually, I do not think there is, because they are not competing with one another.

Q. There would be no problem then in cutting down the rate one-half a cent, or one-quarter of a cent to meet the competition which the Ontario toll road might provide?

A. I do not think that situation has arisen in the past. It is hard to say what might happen.

Most of the facilities are meeting their financial obligations ahead of time, so they would not experience any difficulty in reducing tolls, I would not think.

BY MR. AULD:

Q. With the growth of traffic, it might be that by the time it looked as if there was competition, there might be enough traffic for both?

A. That is true.

BY MR. REAUME:

Q. You also find that the bonding companies, the

insurance companies and the financial houses have seen the plans, and they, too, have done pretty well.

MR. CHILD: Has there not been an offer by private enterprise to construct the toll road.

MR. REAUME: There has been indications of that.

THE CHAIRMAN: We found in the United States that the financial houses which underwrite these schemes, require surveys to be made by an engineering firm of their own choosing, and I think they told us those surveys cost from \$35,000 to \$40,000.

We have several of them here, which we propose to look at this afternoon.

We have one from the state of California, where the answer is in the negative. The engineers simply say the traffic is not there, and it will not support toll roads.

This (indicating) is from the New York Thruway. They call it the "Feasibility Report".

On the basis of that report, they built the road. The underwriters will accept that from an engineering firm.

I feel, from our point of view, we are not qualified from the information we have received, to do anything further than suggest further study be made.

MR. REAUME: I think that is right, surely.

THE CHAIRMAN: Is there anything further on Route No. 5? (No response).

If not, we will proceed with No. 6.

BY THE CHAIRMAN:

Q. Have you anything to say with regard to Route No. 6, Mr. Macnee?

A. That is known as "Route 6", which is London to Sarnia.

On the basis of traffic that is there right now, using Highway 22, and with overlapping sections of Highway No. 7, there are only 3,000 cars a day currently using that, which would indicate that it is very doubtful if toll facilities could be used in that area.

There is one reservation, however, and that is there is a possibility -- personally, I think it is somewhat remote -- that there would be enough traffic generated in the northern part of Michigan which could use a Sarnia-to-London route, to tie in with the rest of the toll road.

However, I personally doubt if there would be enough induced traffic for that.

BY MR. CHILD:

Q. You say from northern Michigan?

A. Yes.

Q. To where?

THE CHAIRMAN: It is set out in the report.

THE WITNESS: To the New England area, or New York.

The existing roads are perfectly capable of carrying any of the traffic which is there, and are capable of carrying it for many years ahead.

BY THE CHAIRMAN:

Q. That spur line you mention would probably be induced traffic, in the event that the route from Fort Erie to Windsor would be built?

A. That is right.

Q. But any decision on that would be well into the future?

A. I would think so, yes.

THE CHAIRMAN: Is there anything further on Route No. 6, London to Sarnia? (No response).

BY THE CHAIRMAN:

Q. Then, Mr. Macnee, what have you say about No. 7?

A. The next one, No. 7, is the proposed Highway No. 401.

I was fortunate enough to have some strip maps showing the traffic volume we estimate will use that road.

The proposed route follows what we call

"Route A" -- it is on the descriptive map.

You will notice on that, that throughout its entire length -- that is, with only one or two very minor exceptions -- the volume exceeds 5,000. At some places, it gets reasonably high. For instance, at the Toronto end, it is up around 8,000.

These figures are based on vehicles which would either save time or distance by using that highway.

There is no commuter traffic shown in that at all -- no short-distance traffic.

These figures which are on here (indicating) are for 1951 -- the July traffic in 1951.

The figures for 1955, according to this chart, would be about 29 percent. higher. So it would look on the face of it that Highway No. 401 could quite conceivably be made self-sustaining, as a toll facility.

Q. That would be how far?

A. Right from Toronto through to Windsor.

The section London to Windsor was the section included in the Fort Erie-Windsor figures.

These figures were included on the basis of possible induced traffic which you might get from London to Windsor, but even without the induced traffic, it is conceivable it would pay.

Q. You are averaging 5,000 cars on that stretch?

A. Yes.

Q. I believe you are averaging that right from Toronto to London?

A. Yes. There are one or two points where it drops lower, but it is more than compensated for in other ways.

Q. Would you say there is no local traffic involved in that traffic?

A. We have included a very small portion of traffic from Ingersoll to London. That would be about the shortest trip we could consider.

BY MR. CHILD:

Q. If Highway No. 401 was considered as a toll road -- was used as a toll road -- would that not eliminate the potential for Route No. 5?

If Highway No. 401 is built as a free road, I do not think it would be possible to put a toll road up alongside of it.

A. I think the toll road would still be feasible from London to Fort Erie, but it could not compete with 401 from London through to Windsor.

Q. You say from London to Windsor it could be a toll road --

A. Highway No. 401 could be a toll road. But I do not think a toll road could be built alongside Highway No. 401, that is, if Highway 401 were free.

Q. A moment ago, you were discussing Route No. 5 as possibly the best.

A. I was considering the London to Windsor section, that Highway 401 would be part of the toll road.

Q. Oh, I see. In other words, Highway No. 401 would be a freeway all the way through?

A. No, you have your choice of 401 or the toll road -- one or the other.

BY THE CHAIRMAN:

Q. Are you in a position to express any opinion as to this 5,000 figure as being the minimum -- before any consideration is given?

As I understand it, it is accepted today as a rough rule of thumb. If you have not 5,000 cars per day, the idea there is that there is no point in even considering a toll road?

A. What I did the other day, more in the form of "doodling" than anything else, I assumed a road 100 miles long, with an average 5,000 cars throughout its length, and I assume the average car would be charged one and one-half cents per mile, and commercial vehicles would be around six cents -- I believe it was -- a mile, and I assumed 20 percent. commercial vehicles, and that give me an appreciation of the revenue the road would take in.

I took an average figure from the Garden State Parkway as maintenance costs, and what I had left over was for retirement of capital funds, and I believe it came out to the order of \$800,000 per mile available to build the facility.

Q. Figuring on 5,000 cars?

A. Yes.

Q. Why did you choose 20 percent. for commercials?

A. That seemed to be a fairly typical figure for commercial vehicles in southern Ontario.

Q. In other words, looking at Route "A" and the figures marked on it; is it fair to assume that 20 percent. is commercial?

A. It would be a pretty close figure, to say 20 percent.

BY MR. AULD:

Q. Could you go at it in perhaps a slightly different way?

Our costs for construction per mile on the No. 401 standard, are perhaps the same, or a little lower.. Our costs of construction are appreciably less than in New York state, which would give you a slightly lower average.

A. I believe Mr. Fulton said our costs were between \$600,000 and \$700,000 per mile, which is comparable

with the cost of freeway construction in the States, but the costs of interchanges will boost it up.

When we did a rough calculation, it struck me that \$800,000 per mile due to the increased costs of interchanges, would be a fair presumption.

It seems that 5,000 cars is about the cut-off point.

Q. We are building almost as many interchanges as they are, but as our costs are less, it makes it about the same figure.

A. That may be.

BY MR. CHILD:

Q. Based on this figure, would we just break even for the capital costs?

A. It would vary, possibly.

Q. In other words, there will be more yield, but a lower profit?

A. That is true.

BY MR. AULD:

Q. What sort of toll-collection facilities would you have on one of our interchanges, or just a barrier across the road?

A. I used the figures which were in one of these papers I think you received from New York Thruway, or it might have been the Garden State Parkway -- it was

the Garden State Parkway -- there it would be barriers.

Q. Not a toll station at every interchange?

A. No.

BY MR. CHILD:

Q. You were speaking of maintenance costs; that includes the overhead?

A. I took -- I believe it was the Garden State Parkway -- I took their total maintenance costs and divided them by the length of the road, and came out with the average figure.

Q. That is for men and equipment and materials?

A. Yes.

BY MR. ROOT:

Q. This survey on the question of whether people would use that road, rather than a toll road, is based on the idea of it being a free road?

A. Yes; oh, yes, definitely.

Q. If it was a toll road, there would be a dropping off on the other road?

A. Yes, but with the natural growth of traffic, I think it would be more than compensated for, because the 1951 figures would more than compensate for the fact that we might lose part of that traffic.

BY THE CHAIRMAN:

Q. Are these 1951 figures?

A. Yes.

BY MR. YAREMKO, Q.C.:

Q. This figure for 1951 is a very rough rule of thumb?

A. Definitely.

Q. There are many factors involved, which all end up in how you will get your money.

In some cases, we discovered on our trips, if the state was not going to guarantee bonds, the financial houses would require twice the revenue, or 1.8 greater revenue.

If they were basing it on 5,000 cars, they would have been prepared, had the state been prepared to guarantee the money, to finance a road which would carry only 3,000 cars.

THE CHAIRMAN: I do not think that was quite it, Mr. Yaremko.

As I understand it, if you did not have a potential of 5,000, you would waste your time in investigating the matter any further at all. That was the reaction I got.

Just because you have 5,000 cars, does not mean you can support a toll road, but it does mean it is worth the time and money in making further investigations.

MR. YAREMKO, Q.C.: I got the impression someplace that it was only 4,000 in some cases, provided the bonds were guaranteed, and the financial houses might be interested.

MR. AULD: Are you not getting around to the actual bond issue itself, and not a consideration of the original planning?

I think it was a question of interest rates and additional safety factors, for instance, 1.8, where you have almost that much more revenue, which you figure you will require.

I got one figure where there was a state guarantee, but I do not think they agreed to it, because of the original surveys.

MR. YAREMKO, Q.C.: I was thinking of it as on the basis of the estimated income being twice what was necessary to pay off the bond issue. They were going on the basis you have actually twice as many vehicles travelling on that road, and created the safety factor.

MR. ROOT: I may have misunderstood it. When "New York" and "5,000" was mentioned, I thought they had the idea that our costs of construction for 5,000 vehicles was worth a survey.

Then we go out on the New Jersey Turnpike, where

it costs \$2,500,000 per mile, and 5,000 vehicles would not carry it.

THE WITNESS: Perhaps that was made up to have at least 5,000.

That is not a magic figure by any stretch of the imagination.

But in my rough calculation, I worked out if you do have 5,000, you would be able to spend something in the vicinity of \$800,000 per mile.

If you were going through rugged terrain, where it would cost you a million and a half dollars per mile, you would have to have perhaps 18,000 cars a day, but if you were going through terrain where you could "get away" with much lower costs, you might "get by" with 3,000 cars.

do not

But if you have something in the neighbourhood of 5,000 cars, it is not worth spending \$35,000 or \$40,000 for this feasibility study, because you know the answer before you start.

If it is over 5,000, it is worth further study, of the particular costs of a particular area, and the willingness on the part of the motorists to pay for it.

For instance, in the southwestern part of the province, you have reasonably flat land, and you do not have to have very much traffic for Highway No. 2, to make

it a desirable road, but whether people may be willing to pay one and one-half cents a mile, and spend one hour or one hour and a half on the trip, may be doubtful. Maybe you could not get one and one-half cents a mile and you might have to settle for one cent.

But, as a starting point, 5000 seems to be a reasonable point where you can forget everything below it, and concentrate on conditions above it.

BY MR. CHILD:

Q. To bring that up to date, you multiply it by 1.29?

A. That is right.

BY MR. AULD:

Q. On the Turnpike in New Jersey, I think the passenger cars pay \$3.75, whereas the commercial vehicles -- the heaviest ones -- pay up to \$23.75. They seem to charge what the traffic will bear.

It might be worth that in the mountainous parts of Pennsylvania. In Pennsylvania, they have 360 miles, and the maximum toll is \$23.75.

It would be about 6 cents, whereas in New York it would be about 4 cents.

BY THE CHAIRMAN:

Q. Where did you get the 6-cent figure? It was just a figure?

A. It was just a figure.

Q. I think perhaps it is a little bit high.

A. It might be. Most of them are based on a ton-mile basis, so they vary.

I would imagine that 6 cents would be representative of the heavier vehicles.

Q. This first chart (indicating) goes just east of Toronto -- or skips Toronto, and starts where? At Port Hope?

A. We start at Port Hope, and you will see the volume east of Toronto, where it is considerably less (indicating).

One point about the section east of Toronto is that the induced traffic will not be as big a factor as west of Toronto, because it is inconceivable to think that American traffic will fight their way north through New York state, to get onto 401, to go from Toronto to Windsor.

Any traffic which wants to go between Montreal and Toronto, or from the province of Quebec into south-western Ontario, has no alternative but to use Highway No. 2 or Highway No. 7.

There is certainly nothing to be gained by going south of Lake Ontario at the present time.

By the same token, there is nothing to be gained

by American truckers driving around the top of Lake Ontario, so there would be a reasonably small amount of traffic induced into that area.

Q. There is the industrial inducement?

A. Yes, that is quite true.

Q. That is quite a large factor?

A. Yes, and the Seaway may have quite an effect on the development in the Brockville-Cornwall area.

BY MR. AULD:

Q. Could you hazard any guess, if the Seaway puts this highway down toward the Pennsylvania border, which looks a little remote, as they did not "go for" that bond issue last week, but they plan on putting a highway close to the Pennsylvania border, crossing here at the Thousand Island bridge, which is between Brockville and Gananoque.

A. At the present time, the Ivy Lea bridge is carrying something less than 2,000 cars a day, so there would have to be a phenomenal growth before that would enter into the picture at all.

We have experienced no difficulty with traffic coming off the Ivy Lea bridge. There is only a difference in volume of 30 cars from one side to the other.

I grant you there is traffic going east and

west, but it is not a very considerable volume of traffic.

BY MR. YAREMKO, Q.C.:

Q. I think this particular road highlights a particular aspect on the question of toll roads. It appears that something will have to be done about this route, and as a result, Highway No. 401 is being proposed, because they need something more than they have there at the present time.

Highway 401 is being expanded to a four-lane highway right across -- or most of it.

A. What we are attempting to do in the east -- and, in fact, throughout the province -- is that we are trying to get two types of road, a local service road, and Highway No. 2 which currently serves the purpose.

Then we want a through road to handle the through traffic.

If you take the local traffic off of Highway No. 2, people going from, say, Brighton into Trenton, or Trenton into Belleville -- there would be nothing wrong with that highway at all.

But we have mixed traffic there, a mixture of through traffic and local traffic, and we just cannot mix them.

So we are trying to segregate the traffic that

takes the through road, which likes a speed of, say, 50 miles an hour, and if they can do that, we would not find too many speeders.

But the little fellow going from one town to the next, is really moving to get there.

It is a jerky sort of traffic, and interrupts the through traffic.

BY MR. YAREMKO, Q.C.:

Q. My point is this; it appears that a through highway is necessary along here (indicating)?

A. Definitely.

Q. If we approach this (indicating) with the attitude, "Will it pay as a toll road?", and we come to the conclusion that a toll road will not pay, it still has to be built out of the same funds, so we will have to build it as a freeway.

If we cannot build it as a freeway, we may have to build it as a toll road, which probably would not meet the high requirements that a toll road would meet from Fort Erie to London.

THE CHAIRMAN: In other words, we do not necessarily have to approach this business of charging toll from the point of view that the road must be self-supporting?

MR. YAREMKO, Q.C.: That is it, exactly.

THE CHAIRMAN: Every road upon which we travelled and saw in the United States was built on the basis that the road would pay for itself in a certain number of years.

However, these are only things to consider. We are reaching no conclusion. But if, in order to built the roads needed throughout the province, we do have to charge tolls, those tolls do not necessarily have to pay for the road in any period of time.

If they only paid for the maintenance, they would release other funds for other roads.

MR. YAREMKO, Q.C.: It would assist traffic from Toronto to the Quebec border.

THE CHAIRMAN: And also assist in building other roads in the province, instead of a large percentage of the appropriation being put into one road.

MR. CHILD: Are we seeking another source of taxation?

THE CHAIRMAN: If it comes to a toll road, under our terms of reference, I think that is something we must consider.

MR. CHILD: I agree with you. I think it is an excellent point.

But I think the toll road must pay for itself, or it should not be considered.

MR. YAREMKO, Q.C.: Which drives you into the illogical position of building it as a freeway, because it would not pay for itself as a toll road.

MR. AULD: You are speaking of private financing, with no government guarantee? If there is a government guarantee, you do not require one vehicle.

MR. YAREMKO, Q.C.: But it boils down to this, that instead of borrowing \$750 million to build highways generally, you borrow on bonds to build specific roads.

THE CHAIRMAN: We hope, in due course, to deal with the financial aspects of the thing, but I do think we will have to adjust our thinking as you suggest.

We cannot think of them purely in terms of something which would be economically feasible in the public money market.

BY MR. ROOT:

Q. Mr. Macnee, on the traffic count east of Port Hope; does that volume of traffic warrant a dual highway? I am not trying to take anything away from eastern Ontario.

MR. SANDERCOCK: I think it would be in the cities and towns. Belleville is terrific and Trenton is worse.

THE WITNESS: To answer your question; these (indicating) are the existing volumes. The road is built

so it will still be adequate at the end of the life of the facility, and we usually work on a basis of a 20-year or a 25-year life.

So to protect our investment today, we have built it so it will handle this traffic until the end of its life.

There is no use in building a road today which in two years you will have to widen.

From an actual volume point of view, these facilities do not require a four-lane, divided highway, but before the facility is worn out, it will definitely require it. That is the attitude we take.

Furthermore, no matter how meaty we are with our figures, we inevitably come up with a figure less than what will be there.

I think the New Jersey Turnpike is a prime example of that, where they had the finest traffic analysts in the world studying it, and yet they still came up with sections which were under-designed by 1,785 percent. These figures are representative, and are today's figures, you might say.

But the road is built so it will supposedly be adequate at the end of its economic life.

BY MR. ROOT:

Q. In other words, you will have an express highway

which will be able to induce industrial traffic, where it would begin to pay, perhaps?

A. That is it. I think you will have to build for a lesser figure than is necessary at the moment, and grow into it.

BY MR. CHILD:

Q. You mentioned the New Jersey Turnpike --

A. I think there was one section which was under-designed by 1,785 percent.

BY THE CHAIRMAN:

Q. They are all running years ahead of their revenue figures, in paying off their indebtednesses.

Looking at our record taken in New York, as far as the "5,000" is concerned: Mr. Yaremko was having a bit of a discussion with Mr. Tallamy of the New York Thruway, and Mr. Tallamy said:

"A. That is right. If you did not have the 5,000 vehicles a day -- well, I will put it in the affirmative; if you have 5,000 vehicles a day as an average for the Turnpike, it does warrant very thorough study, because there is a strong possibility that it will be entirely self-supporting.

"If it dropped below 5,000 vehicles per day, very much, I would say that is quite questionable".

That appears on page 144 of our record.

Then there is something else he says, which might be interesting, and which we find on page 143.

It says:

"That does not mean that on every mile of the expressway you have to have 5,000 vehicles a day. Some sections may have 15,000 vehicles a day, and that will compensate for a good many miles of less traffic and lower mileage.'

"We have that situation here. I think we will average pretty close to 5,000 everywhere, but some sections will be well over 30,000 vehicles a day."

I remember that discussion, where he said there were big stretches of that road which would be carried by other small stretches, where the traffic was concentrated.

Gentlemen, is there anything further we require from Mr. Macnee?

THE WITNESS: There is another section we have not dealt with. It is called "Special Projects". This was mentioned a couple of times, so I thought I would include it.

Occasionally we are forced into some of these multi-million dollar projects, such as the Burlington

Skyway, and possibly the high-level bridge over the Welland Canal.

When we are forced into them, inevitably there is a great deal of traffic, so it seems quite conceivable that facilities like that could be made self-sustaining as toll facilities.

BY MR. CHILD:

Q. That is fine, provided there can be an alternate route. Normally I would say you do not build a toll road, unless you have an adjoining freeway.

A. That is true.

Q. You spoke of the bridge over the Welland Canal, and the Burlington Skyway: where would the alternate routes be for them?

THE CHAIRMAN: They would have to go around through Hamilton, I presume.

MR. CHILD: That is adding on about twenty miles.

THE WITNESS: That is a detail which will have to be worked out for each one.

In the Burlington Bay area, I think something might be worked out, where the existing road could be maintained.

BY MR. CHILD:

Q. Is it not usual, around metropolitan areas, that

thruways are usually freeways?

A. It is true around this part of the world, but when you get into New York City, the arterial roads are free, but in New York, I have difficulty in thinking of a bridge you can cross without paying. You cannot get into New York City without paying, unless you swim.

.. I am not thinking so much of roads, as of the structure itself. Certainly, into New York City, there are no alternative free roads.

MR. YAREMKO, Q.C.: The Burlington Skyway is not being built to serve the immediate vicinity of the area. It is being built for the through traffic.

MR. CHILD: The people in that local area are the ones who would be using it more, and would be more penalized than anybody else.

It is on the edge of a heavily-populated area, industrially, and there are commuters in that area far greater in number than any other district you might care to name, except one in the United States.

You would be putting a tremendous burden on their roads. I am thinking of it locally, because I am familiar with it.

These people on Burlington Beach -- many of them go into Hamilton, and you might have to build another bridge to take care of the traffic.

THE CHAIRMAN: These things will have to be considered. But sometimes there are situations, as I have found in some situations in the United States, where you might have a toll road, but you do not pay to ride. It comes under "diversion of taxes", and that sort of thing.

MR. YAREMKO, Q.C.: Perhaps we will get some information on this, in studying the California scheme. I understand they have freeways, but all their bridges are toll bridges.

THE WITNESS: In the United States, practically all of the major bridges are toll facilities.

THE CHAIRMAN: They just cannot do it any other way.

THE WITNESS: I am thinking of New York City. You cannot get on to Manhattan Island without paying toll. You cannot cross the Hudson River.

There is one which does not collect enough to pay the toll collectors, but they have the toll.

MR. ROOT: There is one where they have a special toll.

MR. MacDONALD: They said it would be one of the most lucrative bridges on the entire route.

BY MR. AULD:

Q. Did they not have to buy another bridge to

put that in?

MR. YAREMKO, Q.C.: I asked them why they were building a bridge at the widest point, and they said it was the only place they could get the concession.

Nobody else wanted to build the bridge in that area; it was too wide.

THE WITNESS: It was either build at that point or build a little ~~farther~~ south, and let the New York Port Authority get all the revenue from it.

It is there under another Authority, which starts just north of that.

MR. CHILD: I understand that will cost \$70 million.

THE CHAIRMAN: I think it is a magnificent bridge.

Mr. Macnee, I would like to express the thanks of myself and the Committee for the informative morning we have had. We are all very appreciative, and I think you have done a great service to this Committee by producing this information. You have given us a great deal to think about.

I want to thank you once again.

---Mr. Macnee retired.

THE CHAIRMAN: We have transcripts of all the proceedings up to date available for distribution. Shall

we bring them in this afternoon to take with you, or
shall we mail them to you?

We have several things to go over this afternoon, and I suggest we come back about a quarter to two, as we will not be meeting tomorrow.

- - - - -

---Whereupon at 12:10 o'clock p.m., the further proceedings of this Committee adjourned until this afternoon at 1:45 o'clock.

- - - - -

A F T E R N O O N S E S S I O N

Toronto, Ontario,
Wednesday, November 16th, 1955,
1:45 o'clock, p.m.

— 40 —

The further proceedings of this Committee reconvened pursuant to adjournment.

PRESENT:

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Messrs. Root.

Sandercock.

Child.

Yaremko, Q.C.,

Auld,

Reaume.

MacDonald.

Mr. D. J. Collins, Secretary.

— — — — —

APPEARANCES:

Mr. W. Q. Macnee, Traffic Engineer, Ontario Department of Highways.

— — — — —

THE CHAIRMAN: Gentlemen, let us come to

We had planned this afternoon to receive some information from the Treasury Department, but they are not prepared to give it to us at the present time. They are still compiling it, so their presentation will be postponed until some later time.

This (indicating) is the report from the New York Thruway. Frankly, I am somewhat at a loss to know what to do with it now that we have it.

MR. SANDERCOCK: They just loaned it to us, did they not?

THE CHAIRMAN: Yes. They have no spare copies, but they sent it up for our use. It is very long and very involved, but is quite interesting.

MR. CHILD: What would it cost to get the important parts out of that by photostat?

THE CHAIRMAN: We thought of that, but decided it was impracticable, because there is so much of it.

MR. COLLINS (Secretary): You will find in the report of your Albany proceedings, abstracts from the book. It contains a synopsis of this report, and so you will have a gist of the material there.

THE CHAIRMAN: I do not think we want to spend a great deal of time on that, unless somebody wants to look at it. This will be your last opportunity, because it will then be gone.

When do they want it back?

MR. COLLINS (Secretary): They did not say, but they do want it back. The synopsis is in the appendix of Volume II.

THE CHAIRMAN: It runs to 54 pages. I suggest we read that, and keep this (indicating) for another month, and if anybody wants to refer to it, it will be in Mr. Collins' office, and a month from now he will feel free to send it back.

Is that satisfactory?

(Concurred)

THE CHAIRMAN: We have some information here from the state of California.

You will remember in our discussions in New York, the state of California was mentioned periodically, because they had done things differently, and they had stayed with the freeway type of highways.

MR. CHILD: Is there a general reason for that?

THE CHAIRMAN: That is exactly why we asked for the information which is being distributed now. I think if we go over this and discuss it in a general way, we may find that some of their problems are not dissimilar to ours.

MR. ROOT: Are similar to ours?

THE CHAIRMAN: Not dissimilar to ours.

MR. AULD: In Volume V of the proceedings on page 319, Mr. Rose is quoted as saying:

"71 percent. of their traffic is trucks producing about 22 percent. of the revenue."

I think those figures must have been transposed.

MR. COLLINS (Secretary): Oh yes, it is the reverse.

MR. AULD: He may have made a mistake himself.

MR. COLLINS (Secretary): I can remember him saying the small truck traffic was producing quite a bit of revenue, but not as much as Pennsylvania.

MR. CHILD: 71 percent. of the traffic is trucks, and they pay six times as much as passenger cars.

THE CHAIRMAN: I think we can assume that these figures were transposed.

We wrote to California, and received a great deal of information from them, and it has been summarized in this printed material you have been given.

Perhaps I can read this letter (indicating) from the Department of Public Works, of the State of California. It is addressed to Mr. Collins, the Secretary, and it reads:

"Dear Mr. Collins:

This is in reply to your letter of October 13,

requesting information on California's highway system. I appreciate your interest in California's highway program.

Under separate cover I am sending you material regarding the financing and planning of our freeway program which comprised three lectures that were prepared by our staff engineers for presentation at the summer session in highway engineering for the Institute of Transportation and Traffic Engineering at the University of California this summer.

I believe that within the scope of these papers you will find a fairly clear explanation of our policies and procedures under our existing laws. I am also sending you a feasibility study for toll road between San Francisco and Los Angeles.

The field is so extremely broad and the complications so varied in carrying on the complete program, I would hesitate to submit general comment beyond the material I am sending you; however, you can be sure that after review of this material if you wish to pose specific questions, we will make every effort to answer them within the scope of our experience.

Very truly yours,
(signed) 'G. T. McCoy'
State Highway Engineer."

This (indicating) is the material which has been summarized.

I suggest we ask the Secretary to read part of it, and then I will read other parts, and we can discuss it. I have not read it myself.

If there is anything in it you wish to discuss, just break in, and we will see if we cannot get something out of it.

MR. COLLINS (Secretary): I might say the summary you have contains the full papers on the background part of designing and planning. It is rather a long one, and there are detailed plans and procedures which are rather technical and elaborate, and is not summarized. These are largely technical papers. They are available if anybody wants to see them.

(Page 478 follows)

This reads as follows:

The basis for California's present day freeway program lies in the unique transportation history of this State. Every state has traffic problems, but California's problems have been compounded by the combination of large area, extremely diversified topography, both metropolitan and rural expansion, and a quadrupling of its population in the space of about one generation to make it the second most populous state in the nation. At the same time it has by far the largest motor vehicle registration of all the states.

The timing of California's growth is an important factor in making this what many people have called "a state on rubber-tired wheels". The largest population increase occurred, and is still occurring, after the great era of American railroad development. We have hundreds of communities without railroad service of any kind, California has climbed from less than 3-1/2 million population in 1920 to about 7 million in 1940 and more than 12-1/2 million now. At the same time our motor vehicle registration has gone up from 600 thousand in 1920 to nearly 3 million in 1940 and has since more than doubled to approximately 6 and a quarter million.

These figures are not cited in the traditional California booster spirit, but to illustrate the magnitude

of our transportation problem. If California can lay claim to any degree of leadership in the development of freeways, you might say that we were forced into it by the sheer impossibility of handling this huge and growing traffic volume any other way.

California has approximately 137,000 miles of road, street and highway. This system comprises about 68,000 miles of county roads, 23,000 miles of city streets, and about 14,000 miles of State highways. The balance covers national forest and other public roads, including such miscellaneous items as subdivision roads. The State highways represent only 11.7 percent of the total mileage, but they carry about 45 percent of the total traffic.

Up to the last year or two, the deficiencies of the State Highway System were increasing at an alarming rate. In 1952 the Automotive Safety Foundation made an inventory of State highway needs for the California Legislature and estimated the cost of correcting our deficiencies at three billion 416 million dollars. This estimate confirmed the previous findings of the Division of Highways.

The Freeway Law: California has shared with most other states the experience of constructing wider lanes, adding more lanes, and bypassing congested areas -- all to little avail, as the traffic kept on increasing and the roadside areas kept on developing, bringing more

congestion and accidents. It quickly became evident that control of access was the key to sound long-range investment in highway safety and capacity.

In 1939 the Legislature enacted a freeway law. This law included the following provisions:

" 'Freeway' means a highway in respect to which the owners of abutting lands have no right or easement of access to or from their abutting lands or in respect to which such owners have only limited or restricted right of easement or access.

"The department (Department of Public Works) is authorized to do any and all things necessary to lay out, acquire and construct any section or portion of a State highway as a freeway or to make any existing State highway a freeway.

"No State highway shall be converted into a freeway except with the consent of the owners of abutting lands or the purchase or condemnation of their right of access thereto."

Other statutory provisions regarding freeways will be touched on in the course of this seminar, but these clauses are the backbone of our present freeway development. The law has been thoroughly tested in the courts of the State and has been upheld by the U.S. Supreme Court.

Authority to declare State highways as freeways

is vested in the California Highway Commission, a seven-member body appointed by the Governor.

And they included what they call "The Visual Cast Chart".

FREEWAY DECLARATIONS

As you can see on the chart, freeway declarations began rather slowly and did not begin to mount appreciably until after World War II. By now, however, the Commission has declared 2,888 miles of State highways to be freeways --- more than 20 percent of the State highway system.

Freeway Progress: Before World War II California had succeeded in completing only one section of what we now term a full freeway. This was the 8-mile-long Arroyo Seco Parkway, now renamed the Pasadena Freeway, in the Los Angeles metropolitan area. The idea was even criticized in the 1930's as an engineer's costly vision. Now, of course, this section of six-lane freeway is actually substandard in some respects, but it is still giving excellent service. Last year it had an average daily traffic of 51,390, with an accident record comparable to other full freeways in this state.

Meanwhile, construction of multilane divided highways without access control or with only partial access control had been started before World War II. By July,

1945, we had 329 miles of four or more lanes divided, and by July, 1947, this had increased to 481 miles, some of it with access control.

July, 1947, was the starting date of an expanded highway construction program under legislation which provided for an increase of 1-1/2 cents in the gasoline tax, making it 4-1/2 cents per gallon, and increases in other highway user levies. During the next six years while this schedule of highway revenues was in effect, California's multilane divided highways of all types was increased to 1,064 miles completed and 143 miles under contract or advertised; a total of 1,207 miles. A little more than half of this mileage consisted of access-controlled highways; we had in actual operation in July, 1953, 91 miles of full freeway, and another 569 miles of expressway, with control of access but with some crossovers and intersections at grade.

Even this increase in our mileage of modern highway facilities failed to keep pace with the mounting traffic needs of the State. This fact was borne out by the 1952 study which I mentioned earlier. The freeways and expressways which were in operation by 1953 whetted the appetite of the motoring public for more of the same, and it became generally recognized that financing was the key to the problem. The Legislature responded to this need in 1953 by enacting additional highway user taxes,

including an increase of 1-1/2 cents a gallon on gasoline, bringing it to 6 cents a gallon. There was relatively little opposition to the increase, and everyone concerned was gratified to note that there was virtually no objection whatever from the public at large when the new taxes went into effect at the gas pumps.

Other aspects of California's method of highway financing will be discussed by Mr. Ledden later this morning. That is the second section.

Meanwhile, in 1951 the Legislature had taken other action which permitted continued rapid development of freeways. This was the setting up of an advance right of way acquisition fund, now a revolving fund, for use in protecting rights of way for future highway development in cases where improvement of the property was imminent.

In the two years since the 1953 legislation went into effect, we have more than doubled our mileage of completed full freeways, with a present total of 186 miles, and we have an additional 160 miles of full freeway under contract or advertised.

In the same two-year period our total of expressways has also increased, but in smaller proportion, from 569 miles completed in 1953 to 698 miles at present. We have an additional 131 miles of expressway under contract or advertised.

Adding in the divided highways of other types, our total of multilane divided mileage completed as of now is 1,333 miles with another 300 miles under construction or advertised.

Thus in the past two years our mileage of all multilane divided highways in operation has increased by 267 miles, of which 222 miles, or 83 percent, represents freeway-type construction. And of the 300 miles of multilane divided construction now under way or advertised, all except 9 miles include access control.

There are a few especially significant aspects of this trend toward more freeway and expressway construction to which attention should be called.

First, there is the factor of costly freeway construction within cities, particularly the metropolitan centers. Since 1935, State highway routes in California have extended through cities.

Although these urban State highways total at present only 1,231 miles of constructed road, or about 9 percent of the State system, the expenditures for rights of way and construction within cities amount to nearly 40 percent of our total construction program. Obviously, this type of freeway is the most costly for both right of way and construction, since it may involve up to eight lanes, with major interchanges, in highly developed commercial districts. In addition, another 15 percent is

ordinarily spent each year on freeway entrances to cities.

A second significant element of California's accelerated program of full freeways is that while the routes through cities are being developed to these high standards as rapidly as possible there is also a definite trend toward initial full freeway construction in many rural areas. This is a relatively new trend, and helps to account for the proportionate slowing down in the rate of new expressway construction. Formerly, on many inter-city routes, we were financially limited to initial construction of expressways, with provision in the design for separation structures and frontage roads to be provided at a later date. We are still following this procedure to some extent, but in more and more instances, particularly on the Interstate System, we are making the complete jump from a substandard two-lane highway to a modern full freeway.

Third, what about the rural routes with relatively low traffic volumes at present but which will eventually require a full freeway or at least an expressway? Our procedure in these cases is to recommend that the Highway Commission declare these routes to be freeways and then to acquire sufficient rights of way for the ultimate multilane development. But initial construction is on the basis of two lanes only, with the roadway so positioned

as to leave room for the future additional lanes and median strip.

Advantages of Freeways

Public support for the freeway program, as I indicated a few minutes ago, has been a major factor in the progress we have made. This does not mean that specific freeway route proposals are always greeted with enthusiasm in the communities concerned -- there are always people who are in favor of a freeway somewhere else.

Nor does it mean that the idea of freeways has always had clear sailing. But it does mean that the people of California are generally convinced that freeways are the best answer found to date for relieving congestion and for carrying large volumes of traffic safely and expeditiously.

Recent studies by the City Engineer of Los Angeles and by the Automobile Club of Southern California have borne out another advantage of freeways -- savings to the highway user in operating costs and in valuable time. These findings have been widely publicized, and have enhanced the public appreciation of the merits of freeways. The automobile Club study, based on test runs on freeways versus surface streets, came up with a user saving of nearly 4.2 cents per vehicle mile. On this basis, the Club concluded that the 45 miles of

completed full freeway in the Los Angeles area last year would pay for themselves, if the savings could be applied to amortization in less than three years.

The public is also coming to appreciate more and more the fact that freeways save lives. The fatality rate on California's rural State Highway System last year was 8.36 per hundred million vehicle miles. On full freeways, rural and urban, with an average traffic volume of 45,000 vehicles a day, the fatality rate last year was only 1.92. This type of information is called to public attention on every possible occasion, and has received considerable mention in the press. Earlier this month Governor J. Knight issued a statement on California's Safety record in full freeways, calling attention to their consistent low fatality rate over the years.

Organization

The present division of duties and responsibilities was set up in 1937, and has functioned well in the face of a sharply expended program beginning in 1953.

The policy-making and budget-making body for the State Highway System is the California Highway Commission, composed of seven members. Six of these are appointed by the Governor for staggered four-year terms. The seventh, and ex-officio chairman, is the Director of Public Works, who serves at the Governor's pleasure.

The Commission has a number of definite powers and duties. The principal ones involved the allocation of funds for the construction, maintenance and administration of State highways; the adoption of routes for highways which have been designated by the Legislature or in the State constitution as included in the State Highway system; the declaration of highway routes to be freeways; and the authorization of condemnation actions for rights of way.

In all these matters, the Commission has before it the recommendations of the State Highway Engineer. He is the chief of the Division of Highways, and in direct charge of all its functions.

In addition to a Deputy, the State Highway Engineer is assisted by five Assistant State Highway Engineers and two department heads with equivalent status. The different areas of responsibility assigned to each of these officials are clearly shown on the Organization Chart.

Geographically, the Division of Highways is organized into eleven districts. Each district is headed by a District Engineer, except in the San Francisco and Los Angeles metropolitan areas (Districts IV and VII), where Assistant State Highway Engineers are in charge. Each district is organized along the general lines of the Division as a whole.

As I stated a moment ago, this plan of organization has already stood the test of a rapid and large-scale expansion of the highway construction program. We are confident that if a substantial increase in Federal aid made further expansion possible, we could continue to handle any foreseeable assignment given to us.

The machinery which we have set up and which now functions smoothly in handling an expanded construction schedule is our long-range planning program. How this program works will be explained to you by Mr. Ledden.

CONCLUSION -- GENERAL PLANNING CONCEPT

Although we have had to raise our sights to accommodate the tremendous increase in highway traffic, our general planning procedures established in 1947 and 1948 have stood the test of expansion.

This subject will be discussed in more detail by other representatives of the Division but briefly it involves a long-range look - starting with a deficiency survey which has been brought up to date periodically.

A continuous advance planning program is maintained, considering priority of needs and continuity of route development, implementing an orderly process of bringing the projects through the various stages of initial conception, preparation of plans, programming

for acquisition of right of way and for construction.

The progress made and now being made is due in large measure to a very realistic and forward looking approach by the California Legislature which has provided the necessary continuing basis of finance and necessary planning guidance and support at the legislative level.

(Page 491 follows)

from which the State highway program of California was financed were:

Gasoline Tax

Motor Vehicle Registration Fees

Diesel Tax Fees, and

Federal Aid.

Of these, the gasoline tax, which was then set at 3 cents per gallon (State tax), yielded a total of approximately \$36 million in 1945-46 out of a total revenue of approximately \$65 million.

In July of 1947 which was the starting date of our expanded highway program, favorable legislation provided for an increase of 1-1/2 cents in the gasoline tax. At the same time the Diesel fuel tax was raised from 3 to 4-1/2 cents per gallon. The vehicle registration fee was raised from \$3 to \$6; a \$2 fee for driver's licenses was imposed for the first time, and an entirely new schedule of unladen weight fees was adopted, the maximum being \$200 as compared with a previous maximum of \$70. These legislative changes provided an additional amount of approximately \$46 million which became available for highway purposes in the first fiscal year after enactment.

These changes in revenue provided by the Legislature in 1947 developed as the result of previous studies which had been requested by prior legislative action. During the year 1944, at the request of the Legislature,

the Division of Highways started a survey to determine the critical deficiencies of the State Highway System. This survey included reports made by independent engineers and economic consultants employed by the Legislature. It continued during a two-year period, and in it every mile of our State Highway System was reviewed and measured with a common yardstick to determine its adequacy to handle the traffic which it was serving. As finally presented to the Legislature in 1947, the Division of Highways' report, based on this survey, listed the cost of correcting the deficiencies existing at that time as \$1,460,000,000. This cost was further increased to \$1,674,000,000 by reason of the mileage added to the State Highway System during the same Legislative session.

The highway user taxes enacted at the 1947 session of the Legislature were estimated to yield \$757,104,000 over the succeeding 10-year period, or approximately 50% of the established critical deficiency.

In providing the augmented revenues, the Legislature also prescribed certain geographic controls on expenditures.

As indicated on the attached map, the State of California has a total of 58 counties. Some of these counties are quite small, others are quite large; some include high mountainous areas, others low valley areas. Obviously, they are neither equal in areas, population nor

natural resources.

Under present statutes these 58 counties have been divided into two groups, designated as the Northern County Group and the Southern County Group. The Northern County Group includes 45 counties and the Southern County Group 13 counties. For many years funds available for State highway improvements have been, by California law, apportioned 55 percent to the Southern County Group and 45 percent to the Northern County Group.

The 1947 legislation added further controls to this previous geographic control on expenditures. It was prescribed that in each of the two county groups (north and south) a specified percentage of the available construction funds, as shown in the following tabulation by various periods, would be "frozen" to provide minimum guaranteed expenditures in each county.

<u>Five Year Periods</u>	<u>Percent</u>
1947-1952	50
1952-1957	55
1957-1962	65

The balance of available construction funds in each of the five year periods was to be allocated at the direction of the California Highway Commission. This permitted consideration of relative priority of needs, continuity of development of through routes, emergency situations, etc.

The "frozen" portion was further prescribed to be allocated for State Highway improvement in each county on the basis of a table of relative deficiencies, known as the "Mayo formula". In effect, this provided for a minimum guaranteed expenditure on the State highways in each county, in relation to the ratio of the reported deficiencies in each county to the total deficiencies in the respective county group (north or south).

The tabulation of percentages in the law was derived from the deficiency estimates furnished in the 1946 Division of Highways' report to the Legislature. These percentages varied from a fraction of one percent in the smaller counties to a high of approximately 52 percent (of the South County Group) in Los Angeles County.

These, then, were the ground rules laid down by the Legislature in 1947 for our guidance in the apportionment of the increased revenues which had been provided. These were the basic ground rules under which we operated between the years 1947 and 1953.

In 1952, after a period of five years had elapsed since the start of our expanded highway program, the Legislature engaged the services of Economic Consultant Richard Zettel and the Automotive Safety Foundation to restudy California's highway needs. This study was undertaken to check the progress being made toward the correction of our highway deficiencies, to verify the adequacy

of present financing and to recommend, if required, additional measures to be considered. As Mr. Womack pointed out, this 1952 study indicated a total amount of approximately \$3,416,000,000 as being required at that time to correct all of the State highway deficiencies.

After due consideration of the recommendations in this report, and the impact of the findings on the successful continuance of our highway program, the Legislature in 1953 provided for the following:

- (a) 1-1/2 cent increase in gasoline tax
- (b) 2-1/2 cent increase in diesel tax
- (c) \$2.00 increase in License plate fees
- (d) \$1.00 increase in Driver's license fees
- (e) 33% increase in weight fees on trucks and buses.

The table below shows the revenues from the above increases.

All of these increases were to remain in effect until June 30, 1955. The 1955 Session of the California Legislature, just terminated, has provided for the retention of the tax structure as established in 1953, and its continuance until January 1, 1960.

As previously discussed the "Mayo formula" of the 1947 legislation applied to certain percentages of available construction funds, the percentages increasing from 50 percent through 55 percent to 65 percent in three successive five-year periods.

The 1953 Legislature stepped up the percentage

of "frozen" money by setting a new schedule of applicable periods, as follows:

<u>Period</u>	<u>Percent</u>
1952-55	60
1955-58	65
1958-63	65

R E V E N U E S

	<u>Prior to</u> <u>July 1, 1947</u>	<u>1947-1953</u>	<u>Since</u> <u>June 30, 1953</u>
Gasoline Tax (Per gallon)	3 cents	4-1/2 cents	6 cents
Diesel Fuel Tax (Per gallon)	3 cents	4-1/2 cents	7 cents
License Plate (Registration fees)	3 dollars	6 dollars	8 dollars
Operator's License fees	---	2 dollars	3 dollars
Weight fees	up to \$70	up to \$200	\$11 to \$267

- - - -

In this material, which was forwarded to me, part of it is copied. These curves (indicating) referred to are shown, and this Mayo formula is developed very, very elaborately, and it shows how much each County receives, and an organizational chart, and how they function.

They go into a statement of their revenues for the fiscal years, which may be of interest to you.

MR. MacDONALD: Mr. Chairman, it seems to me this

explanation does not explicitly meet the point in which we are most interested. That is, why they chose freeways rather than toll roads.

MR. COLLINS (Secretary): In the report of the feasibility of a toll road between Los Angeles and San Francisco -- it is similar to the reports we have seen elsewhere, and their conclusion is:

" It appears from the evidence that has been presented that at this time a toll road from a terminus in San Francisco to one in Los Angeles is not feasible from engineering and financial viewpoints. Further, no toll route seems financially practicable over a major part of the distance; that is between Wheeler Ridge and a point near San Jose, or alternately, a point near Tracy.

Every effort has been made to set forth fully the premises upon which the discussion and conclusion rest. Most of the assumptions made are well supported by a solid body of fact. But in some cases where little factual evidence is available, subjective judgment was necessarily used. These judgments are believed to be sound.

In closing this report one further and

important note is made. The feasibility of constructing and operating a toll road from San Francisco to Los Angeles has been studied from engineering and financial viewpoints alone. Thus, the report does not go into the question of toll roads as instruments of public policy. It neither delves into their legal aspects nor considers their practicability in other sections of the State. It contains no discussion of what effect a toll road would have on the roads of various systems -- State, County, or City -- with which it would come in contact. In short, the report is limited to those matters specified in the resolution."

MR. MacDONALD: I judge from their information, they would have enough traffic to apply the standard they have accepted, particularly between San Francisco and Los Angeles. Therefore, why did they rule out toll roads, so categorically?

MR. COLLINS (Secretary): They think that some of the sections through which it would pass would not generate any traffic.

MR. CHILD: For a free way through that area?

I think we are getting back to what I said this morning; if there is going to be a road built, somebody has to pay for it. Now, whether a toll road will pay all the "shot" or only part of the "shot", we do not know as yet.

MR. AULD: This argument into which they have gone in California: is that mainly for short-haul roads? Does it consist of these freeways they are building?

Apparently there is a great deal of traffic but it does not go any long distances.

MR. COLLINS (Secretary): This material (indicating) really is not complete enough to answer all those questions.

MR. MacDONALD: No. Their whole focus of attention is on the great increase in traffic, and on the basis of a great increase in traffic, their conclusion has been they did not have something to make a toll road feasible. They did not discuss why they decided in favour of the freeways rather than the toll roads.

I presume having made their decision some years ago, that is their thinking, which is continuing.

MR. AULD: Apparently they are building controlled-access highways to carry a lot of traffic, but where is it going?

MR. MacDONALD: But with the registrations they must have, would it not be considered in the eastern states as sufficient traffic to finance a toll road?

THE CHAIRMAN: That is something we want answered.

I find in the State Highway Fund statement, an estimate of revenue from the 1st of July, 1955, to the 30th of June, 1956, amounting to \$360 million. That is gathered from transportation taxes, used fuel taxes -- whatever that may mean -- gasoline taxes, and Federal aid.

MR. MacDONALD: Their tax revenues I would judge are identical with ours, with the exception of Federal aid.

THE CHAIRMAN: Yes, but the point I am making is they have a very large amount.

What I am really interested in here is what their finances are.

MR. MacDONALD: Proportionately, their registrations are smaller than ours. Our registrations are one and one-half million, and we have roughly /\$275 million, and they have six million registrations, and their revenues are about \$375 million.

THE CHAIRMAN: That even includes Federal aid.

MR. MacDONALD: Even so, our revenues here for licensed vehicles is definitely above theirs, because on a proportional basis, they would have \$480 million, exclusive of Federal aid.

MR. COLLINS (Secretary): I think the average family has two vehicles, and they would not use the vehicles as much.

MR. AULD: There is one vehicle for every two people.

MR. COLLINS (Secretary): I do not know whether it is that, sir.

MR. AULD: They say that is what it is. There they have six and one-quarter million vehicles for twelve and a half million people.

But why do they use that "\$360 million"?

THE CHAIRMAN: They have projected it: Pre-engineering, \$15 million.

Construction engineering, \$12 million.

Rights-of-way, \$81 million.

Maintenance of a bridge, \$1,200,000.

And then "Minor Improvements" and "Contingencies", and then "Major Construction Projects, \$130,000,000."

MR. AULD: Then they do not use any of that for their county or municipal roads.

MR. ROOT: It could be that the extra revenue

in Ontario comes from the tourist traffic, in relation to our registration.

MR. MacDONALD: Their fuel tax is about six cents per gallon, for a smaller gallon. We could put ours at about eight cents.

MR. ROOT: That is, Federal and State taxes?

MR. MacDONALD: In combination with the Federal, plus the smaller gallon, would make it very much more.

MR. ROOT: We have somewhere between five million and six million cars from out of the province, and they drive long distances.

We may be getting actual revenue from the gasoline tax there.

We have one and one-half million registrations, but we have between five million and six million other cars.

MR. MacDONALD: This is sheer guessing, but my guess would be that California has an all-the-year-around tourist trade.

MR. AULD: Practically all of the traffic is between Los Angeles and San Francisco, according to population.

MR. MacDONALD: Mr. Chairman, they have invited further questions, and it seems to me the first

question we should ask of them is the question of why they originally decided to proceed on a freeway basis, rather than on a toll road basis.

MR. AULD: From what we have here (indicating), it would look as if they decided, and then they added one and one-half cents to the gas tax, and then another cent and one-half, and decided to pay for it that way.

I think it was on the assumption that most of their population would be using them.

THE CHAIRMAN: I have here a copy of Dun & Bradstreet's report on the State of California. It is marked "Confidential" and it says:

---Whereupon the Chairman read from the confidential report.

MR. AULD: Is there any breakdown as to how much that amounts to?

THE CHAIRMAN: No.

MR. CHILD: I notice this mentions in there that Federal aid is one of their sources. There is no revenue we receive from the Federal government.

MR. AULD: Except for the Trans-Canada Highway.

MR. CHILD: I mean we have no system of Federal aid.

THE CHAIRMAN: No.

MR. AULD: From what they told us in New York and New Jersey, their Federal aid is for capital

construction and not for maintenance, and it is for certain specific roads.

We have no programme whereby we can go to the Federal government, and have them say, "If you want to build a road from one place to another, we will pay so much".

MR. REAUME: I suppose the State gets a portion of the Federal aid?

MR. CHILD: That is from Federal taxes?

MR. REAUME: Oh, yes.

MR. AULD: The Federal excise taxes.

MR. REAUME: And the Federal sales tax.

MR. CHILD: Yes, that is right.

MR. ROOT: I think, as Mr. MacDonald says, we should know why California did not build toll roads.

MR. MacDONALD: All we know is they generally have a great increase in traffic, as we have here, and they coped with it by raising their gasoline tax and related taxes.

MR. REAUME: A great proportion of the population of the state is in a very small proportionate area.

It would appear from the toll roads I have seen, that you may expect to have traffic off and on nearly all the time.

MR. AULD: I think Pennsylvania said there were only 5 percent. of the vehicles which started at one end and went to the other end of the Pennsylvania Turnpike in one trip.

They may, however, of course, go on for a while, and then get off of it.

MR. REAUME: The one from Albany, they can get on or off at either Rochester or Syracuse, or some other places.

MR. AULD: In Pennsylvania, the percentage was given right from start to finish on the Turnpike, as being a very small percentage. People may come from out of the state, and go halfway today, and stop over and then go on tomorrow, and trucks may go on and stop off at some intermediate points.

A very small proportion of the traffic goes from one end of the Turnpike to the other.

MR. MacDONALD: What is the mileage in Ontario? Do you know offhand, Mr. Chairman?

THE CHAIRMAN: No, I do not.

MR. AULD: The provincial highways total, I think, about 10,000 miles.

THE CHAIRMAN: Do you know how many miles of provincial highways we have, Mr. Macnee?

MR. MACNEE: Only about 5000 in southern Ontario,

and about 3500 in northern Ontario.

THE CHAIRMAN: They have only about 14,000 miles of state highways.

MR. MACNEE: One reason there may be no place for toll roads in California is that the majority of these freeways are urban expressways, which apparently do not lend themselves to toll facilities, except in a limited way.

A very small mileage of freeway construction is outside the metropolitan area of Los Angeles. The majority of it is in the area of Los Angeles County.

MR. AULD: These freeways are only about 20 or 25 or 30 miles in length?

MR. MACNEE: That is true. I think the Hollywood Freeway is only about six miles long.

MR. CHILD: I think under those circumstances we should consider having toll roads on a province-wide basis.

THE CHAIRMAN: May I suggest we write and ask them specifically whether they ever considered toll roads in the broader aspects, and why they have turned them down.

MR. REAUME: I believe the proper way to approach them would be to get what has happened out there, and why they built these roads, and then take the situation

in each case, and apply it to conditions in the province of Ontario. It may be that conditions you will find out there are not the same as you will find here.

I was out there once, and it appears to me -- as has been stated here -- that the area of population is small. There is no long travel between one place and another, and the outer part of the state is something like the barren land you might find in the state of Georgia, or the state of Kentucky, or the state of New Mexico, with hundreds of thousands of barren acres.

MR. AULD: California is more or less of an island which is separated by thousands of miles from any other large centres of population. You have Los Angeles and San Francisco, and then you have to go across two or three states to get to any cities of a comparable size.

THE CHAIRMAN: There (indicating) is roughly what you are talking about in charted form. These (indicating) are the heavily-trafficked areas, and a very low, what they call "trip desire contours", between the various highways.

MR. REAUME: It would be interesting to find out how far it extends on that "green belt" you have there, (indicating), extending from one end of the state to almost the other.

MR. COLLINS (Secretary): It is between 500

and 1000 miles.

MR. CHILD: Are not some of the states where they have toll roads, what are called "border states" where there is a great deal of traffic going through?

THE CHAIRMAN: It is very large in New Jersey.

MR. YAREMKO, Q.C.: How long is that "green belt", Mr. Chairman?

THE CHAIRMAN: About 200 miles. That would seem to be the answer.

MR. MacDONALD: What we should know is why they voted against them.

THE CHAIRMAN: I do not think they voted. I may be quite wrong. I actually do not know.

MR. COLLINS (Secretary): I think so. That is what killed it.

THE CHAIRMAN: At any rate, the information we have does not seem to be too valuable.

MR. COLLINS (Secretary): No, it is not directed toward our problem at all.

MR. AULD: Could we find out where these freeways have been built, and their mileages?

THE CHAIRMAN: Yes, I think we could.

MR. COLLINS (Secretary): If we had a map of that, it would be interesting.

MR. AULD: What the mileage is between

Los Angeles and San Francisco, and how many vehicles use it.

I think it would be interesting to have a breakdown of how they spend their highway-users' revenue.

THE CHAIRMAN: I have the breakdown for 1953, which is pretty complete.

MR. AULD: What do they give to their counties and towns?

THE CHAIRMAN: Out of \$305 million, they give \$104 million to the local governments.

MR. AULD: That is more than one-quarter?

THE CHAIRMAN: Yes.

MR. AULD: Do they say how much comes from the Federal government?

THE CHAIRMAN: The interesting thing there is their bonded debt was only \$800,000 and their highway indebtedness was only \$18 million.

MR. YAREMKO, Q.C.: What year was that?

THE CHAIRMAN: The 1st of February, 1954.

MR. YAREMKO, Q.C.: Their highway indebtedness--

THE CHAIRMAN: Was \$18,575,000.

MR. REAUME: Is that all?

THE CHAIRMAN: Yes. I cannot find any place --

MR. YAREMKO, Q.C.: Did we not get the impression in New York they were borrowing very heavily?

MR. MacDONALD: It was pointed out that

California credit did not seem to be affected?

THE CHAIRMAN: This gives 1953 as well.

Here (indicating) is 1955. The bonded debt as of June 30th, 1955, for highways, was \$61 million.

MR. MacDONALD: There is something peculiar about that. How could they build all those freeways and still only have a debt of \$61 million?

THE CHAIRMAN: We do not know how much they are building, do we?

MR. MacDONALD: They have given the mileage. They have a mileage up to 1,600 now.

MR. AULD: They told us in New York that California had a triple "A" rating, and it declined to a double "A" rating.

THE CHAIRMAN: If you really want to see some figures -- it has nothing to do with toll roads --

MR. CHILD : No, let us not get confused.

MR. MacDONALD: You are asking for the mileage. I see on page 3 of the manuscript from which Mr. Collins read, the following:

"Adding in the divided highways of other types, our total of multilane divided mileage completed as of now is 1,333 miles with another 300 miles under construction or advertised.

"Thus in the past two years our mileage of all

multilane divided highways in operation has increased by 267 miles, of which 222 miles, or 83 percent, represents freeway-type construction. And of the 300 miles of multilane divided construction now under way or advertised, all except 9 miles include access control."

How do they do that, with a bonded indebtedness of \$61 million?

THE CHAIRMAN: They say:

"In the two years since the 1953 legislation went into effect, we have more than doubled our mileage of completed full freeways, with a present total of 186 miles, and we have an additional 160 miles of full freeway under contract or advertised."

I presume that means they have built 93 miles per year.

I do not think we need be terribly impressed with what they have built.

MR. ROOT: Have we any information from any of the border states, as to why they built toll roads?

MR. COLLINS (Secretary): Pennsylvania and New York are not really border states.

THE CHAIRMAN: I see here:

"Thus in the past two years our mileage of all

multilane divided highways in operation has increased by 267 miles, of which 222 miles, or 83 percent, represents freeway-type construction."

That is in two years.

We have constructed that much in two years ourselves.

MR. MacDONALD: 222 miles?

MR. CHILD: No, not in two years, I do not think.

This is not as impressive a record as were led to expect.

MR. AULD: If they include, as they do in the eastern states -- for instance, in Toronto, Yonge Street was designated as part of the highway system. In the states, that would be totally financed by the state, whereas, if they are building these expressways, that would include the mileage.

MR. MacDONALD: They must be doing the greater majority of their major expressways in this manner, because for "rights-of-way" it shows "\$81 million".

That is amazing. It is equivalent to building our expressway down in Toronto where something like one-third of the cost, or better, will be for the rights-of-way.

THE CHAIRMAN: What information do you think

we should get, so that our Secretary can write for it?

MR. CHILD: You mean from California?

THE CHAIRMAN: Yes.

MR. CHILD: I would suggest, as Mr. MacDonald has done, we should ask them why they favoured freeways as against toll roads.

MR. MacDONALD: Or, putting it another way; now that they are faced with a growing mileage on the freeway basis, why are they sticking to their present financing, rather than building toll roads.

THE CHAIRMAN: Obviously they have considered it in some way.

MR. COLLINS (Secretary): I wonder if in that connection you are not asking an executive body why a legislative body did something.

MR. MacDONALD: They should be able to report on what a legislative body has decided.

MR. AULD: Why not find out where the freeways constructed are, and how many there are, and what facilities there are north and south between the two large centres of population, and how much traffic uses them?

MR. ROOT: Could you ask what population there is along a freeway per mile?

MR. CHILD: It may be something like an area

similar to Dixie.

THE CHAIRMAN: They have 12 million people in the state, and they must have some large cities, and quite a few of them. They cannot all be in a comparatively small area.

MR. MacDONALD: I do not believe their concentration of population is any more out of balance than ours in Ontario.

MR. AULD: Metropolitan Los Angeles has around five million people. Los Angeles County sort of spreads out.

MR. MacDONALD: Yes, that is true.

MR. AULD: I think it is the third largest city in the United States; New York, Chicago, and Los Angeles.

THE CHAIRMAN: Gentlemen, as far as I am concerned, we have extracted the meat from this report, in our discussion here today.

We are to reconvene on the 23rd, 24th and 25th, and I think those days will be pretty fully occupied.

You will receive a notification and a schedule, although there is liable to be some change made in the final list.

We will adjourn now until the 23rd.

- - - - -

---Whereupon, at 3:25 of the clock p.m., the further proceedings of this Committee adjourned until Wednesday, November 23rd, 1955, at ten of the clock in the forenoon.

- - - - -



P R O C E E D I N G S

OF THE

SELECT COMMITTEE APPOINTED BY THE
LEGISLATURE OF THE PROVINCE OF ONTARIO,
TO ENQUIRE INTO AND REPORT UPON MATTER
IN CONNECTION WITH TOLL ROADS IN THE
PROVINCE.

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Mr. D. J. Collins, Secretary.

VOLUME VIII

Wednesday, November 23rd, 1955.

Toronto, Ontario.

R. C. Sturgeon,
Official Reporter,
Parliament Buildings,
Toronto, Ontario.

E I G H T H D A Y

Toronto, Ontario,
Wednesday, November 23, 1955,
10:00 o'clock, a.m.

The further proceedings of this Committee reconvened pursuant to adjournment.

PRESENT:

Mr. J. P. Robarts, Q.C., Chairman,
Presiding.

Messrs: Auld.

Sandercock.

Root.

Mackenzie.

Yaremko, Q.C.

Child.

Manley,

MacDonald,

Mr. D. J. Collins, Secretary.

APPEARANCES:

Mr. W. Q. Macnee, Traffic Engineer,
Ontario Department of
Highways.

Mr. J. Roy Corbett, Managing Director,
Ontario Hotel Association,
Toronto.

THE CHAIRMAN: Gentlemen, we have a quorum and can proceed.

We have with us this morning Mr. J. Roy Corbett, from the Ontario Hotel Association.

J. ROY CORBETT,

Managing Director, Ontario Hotel Association, appearing before the Committee, but not being sworn, testifies as follows:

BY THE CHAIRMAN:

Q. You are the Managing Director of the Ontario Hotel Association?

A. Yes.

Q. And this (indicating) is your brief, a copy of which we all have?

A. Yes.

Q. Would you like to present it at this time?

A. Yes.

Q. Will you please proceed.

A. Mr. Chairman and Gentlemen: First of all may I thank you for the opportunity of appearing before you this morning. I think this sort of procedure truly indicates the democratic procedures which can and should be followed when making decisions for the people of this province.

Our brief is probably one of the shortest and

concise you will receive.

I will review the first page which seems to be our thinking about the pros and cons of toll roads.

"For years the people of Ontario have been faced with the question - 'How long can we afford to wait for the roads that we need now?' As one construction season succeeds another, and as maintenance costs increase from year to year, those interested in highway transportation are becoming acutely aware that highway facilities are lagging far behind the requirements of modern transportation.

The toll road, since it makes use of revenue bonds secured by the earnings of the facilities rather than general credit bonds, is not subject to provincial debt limitations. The toll charge, paid only by those who care to use the facility, avoids the political difficulties of raising the gasoline tax rate.

The unique characteristic of a toll facility is, that the money spent for it goes to build and maintain a specific project for which there is a need and a prospective willingness to pay the cost.

These observations, together with the fact that Ontario is a very highly-motorized area would appear to indicate the necessity for toll roads in this province.

"It is our understanding that for the present fiscal year the highway construction and maintenance programme in Ontario is costing approximately one hundred and twenty-five million dollars, with revenue from this source amounting to approximately one hundred and eighteen million dollars. For this reason, the solution to the financing of new highway projects could best be solved by financial arrangements normally made for the building of toll roads - where practical.

It is logical that the Ontario hotel industry should be vitally interested in the toll road problem. Not only is the prosperity of the hotel industry directly linked to the prosperity of Ontario, but our interest and duty as citizens requires that we contribute facts and information for the consideration of this important Select Committee of the Ontario Legislature.

The Hotel Association of Province of Ontario has two constructive suggestions to make:

1. That, at appropriate locations on the toll road substantial parking areas be provided, where, especially tourists, have an opportunity to study a map of the area, similar to those in use at the present time. Nearby could be posted

a list of the overnight accommodation facilities in the area, as well as eating establishments.

We can readily visualize that during the busy tourist season information depots could be set up by local Chambers of Commerce, where the operator would be in a position to confirm overnight accommodation, thus eliminating the often wearisome trek from place to place in order to secure a room for the night.

2. The Hotel Association of Province of Ontario shares the thinking of the American Society of Planning Officials, who find much merit in keeping the toll rates high for the rush hours with lower rates for the off hours. This system could not only serve as a revenue producer but also as a measure to control traffic.

We further suggest varying rates according to the number of passengers in a car and the importance of a truck's cargo 'fruit, vegetables', might be judged high priority and pay less than the car driven for pleasure.

In concluding the Hotel Association of Province

of Ontario urges that, where possible, the fullest cooperation should exist between the Department of Highways and the Department of Travel and Publicity in the future planning of toll roads in Ontario. We believe this to be highly essential because of the relation which good roads bear on the number of tourists who visit this province, bringing with them those all important tourist dollars that are added to the capital wealth of every community in this province.

Should further information be of assistance from this Association we shall welcome the opportunity to be of service.

Respectfully submitted,

(signed) 'J. R. Corbett',

Managing Director¹¹

As an aside, gentlemen, we feel that there is some possibility that toll roads would detract from the volume of business which might come to the hotels of this province. However, the general expression from our members is that those who travel on the toll roads have a definite destination in mind, and the volume of business we might lose is more than made up when we consider the safety factors and the ease in getting over a province, which is highly-motorized.

Assuming toll roads will be proceeded with, we have one or two observations we would like to make which

we think might be helpful to the motor-travelling public.

The first is the suggestion that at suitable places, sizeable areas should be provided where, especially tourists, can pull off the highway, and will provide them some place for relaxation, and we believe that should be a sizeable area.

We believe the Department of Highways is following this procedure at the present time.

This provides the tourists with an opportunity of sizing up an area which is probably new to them, and we think there is a great deal of merit in providing them with a list of over-night accommodations. By that, we do not mean huge signs, but just some indication of the accommodations available in the area, and how accessible they are.

We might also see Chambers of Commerce through the busy tourist season provide operators who might be in a position to provide information concerning different types of facilities, and with information concerning over-night accommodations, and thus eliminate having to drive from place to place, and perhaps avoiding great discomfort.

As you will note, our second observation states that we join in the thinking of the American Society of Planning Officials, who find much merit in keeping the toll rates high for the rush hours, with lower rates for

the off hours.

This system, we feel, would not only serve as a revenue producer but also as a measure to control traffic.

We further suggest that there could well be varying rates according to the number of passengers in a car, and the importance of a truck's cargo, such as fruits and vegetables, which might be afforded high priority, and pay less than is paid for the car being driven for pleasure.

We think in a province where the population is on the increase, and where such products will have to be moved about to a greater degree, and because they are perishable, we feel there is merit in doing all we can to expedite the movement of perishable products.

Millions of dollars have been spent in an endeavour to improve the flow of traffic, and increase the tourist dollars coming into this province, and we think the observations which may be made by the Department of Highways in such projects should receive high priority, because the tourist dollars are added to the capital wealth of our economy, and we are satisfied they are the most important kind of dollars to this province.

I might also add that if there are any questions any member of the Committee would like to ask, while I may

not know all the answers, I will be glad to answer any of your questions which I can, and I wish again to add my thanks for the opportunity of appearing before you this morning.

THE CHAIRMAN: Thank you, Mr. Corbett.

Are there any questions any member of the Committee would like to ask Mr. Corbett?

BY MR. ROOT:

Q. Is there any formula for having a difference in tariff for the rush-hour periods? A man might be on the route before the rush-hour period, but before he got to his destination, he might be into the rush-hour period.

A. I cannot recite the formula which is applied at the present time. I think the research the Committee has probably already done in regard to other toll roads would indicate it might be feasible.

MR. MacDONALD:

Q. I notice this suggestion of varying the toll rates for the rush hours, emanates from an organization known as the "American Society of Planning Officials". That is a new one to me. Could we get a bit more information on that?

A. Mr. Chairman, lady and gentlemen; in preparing some of the material for this presentation, we wrote to several of the more prominent American hotel officials,

and many clippings were sent in by this particular organization, which dealt at considerable length with the matter, and if it would be of any benefit, I will be glad to secure the necessary clippings and send them to your Secretary.

THE CHAIRMAN: That is an angle into which we have not gone to date, that is, the question of varying the tolls with the times of day or the flow of traffic, or the times of a week.

BY MR. AULD:

Q. Would that refer to urban expressways? I do not see how you could do that on a road, say, 200 miles long, between two points. As Mr. Root suggests, somebody might start at nine o'clock in the morning, and might be into the high-tariff time after perhaps an hour's travel, or, to put it the other way, if he should start at nine o'clock in the morning, he might be in the high-tariff time when he started, and after an hour's travel, might be in the low-tariff period.

On the urban expressways, of course, is where it would really apply.

A. From the newspaper clippings referring to this problem, it was indicated it applied from the large centres to perhaps the first point of access, which might be twenty miles away. It seemed to indicate there was

a large traffic from the suburbs, and they felt that somewhere in there, there should be a higher charge, because it might be found they were lowering the rate of traffic at the peak intervals.

MR. ROOT: I suppose the time a vehicle would enter the toll road could be calculated, to give some indication as to how long he would be on the road.

It was a new idea, and that was why I asked the question.

BY THE CHAIRMAN:

Q. Mr. Corbett, there is another point you raised. You mentioned the fact that you thought the toll roads might decrease the traffic flowing into the tourist areas. Would you care to elaborate on that at all?

A. Yes. From experience, for example, on the Thruway which cuts through New York state, a good many of the resorts located in that area feel they have lost a substantial volume of business.

However, there are others who feel the loss of business is not particularly due to the Thruway, but there is no way of proving how much or how little has been lost for that reason.

I think it sometimes serves as an alibi for loss of business, but the general consensus of opinion seems to be that if there was a toll road from, say,

Windsor to Buffalo, the majority of the people would use that road, who would not be interested in stopping off at Chatham or Hamilton or St. Catharines, or they would probably use the other highway facilities.

I believe there is quite a tendency for tourists to use the other roads, because they are more scenic, and have greater possibilities for sight-seeing in any community.

BY MR. AULD:

Q. In other words, the people who would use the Thruway would be the people who would not stop anyway?

A. We feel there was a very small chance they would stop to take in the scenery in that area.

BY MR. MacDONALD:

Q. The only reason they would stop would be if they found it necessary to stop over night?

A. That may be so.

BY THE CHAIRMAN:

Q. I suppose your first recommendation would go to curing that situation?

A. Yes. We believe that is the best way of motivating a desire to see the scenery, apart from any other interest whatsoever.

BY MR. ROOT:

Q. Have you found, if a highway by-passes a town

or a city, that it affects the hotel trade?

A. In some areas, yes. In other areas, they tell us there is very little difference.

I think it is fundamental, depending on how good the accommodation is. You know, if you have something good to offer, the world will beat a path to your door anyway.

Q. Do you represent just the hotels, or the motels as well?

A. No, I am just representing the hotels.

MR. MacDONALD: Mr. Chairman, if we have finished that particular line of questioning, there is another about which I feel a little curious. It seems to me the logic seems to be out a little bit.

BY MR. MacDONALD:

Q. Why do you think that a cargo of fruits and vegetables should necessarily be given a lower tariff? What is the logic in that?

I can see how you might want to rush them through, but a lower tariff would not rush them any more.

A. It would increase the use of the facility. I think if cargoes like that used a thruway, it would expedite the arrival of the load at its destination, and if there was a tendency to charge a sizeable fee, they might resort to the other highways, and deliveries might be considerably late.

Q. Oh, I see what you mean. But it strikes me

if you start to discriminate with different charges for those using the road, you will find yourselves faced with more problems than you would be able to solve.

A. We feel definitely there would be a tendency to transport loads of perishable commodities, for example, some of the citrus fruits at certain seasons of the year, and they would have a tendency to use these roads if the fee was not too heavy.

BY MR. AULD:

Q. Generally speaking, the toll roads we visited showed us that commercial vehicles used the roads, and paid the toll, because it was cheaper to travel that way. The cost of the toll was more than off-set by the savings to them in fuel, maintenance, oil and so on.

There was not any added inducement necessary.

BY MR. ROOT:

Q. On the New Jersey Parkway -- there, they keep the trucks off.

A. I would think the volume of traffic in Ontario would certainly provide facilities for trucks, because it seems to me they would derive some of the greatest benefit from using roads of that sort.

Q. You mentioned parking areas for tourists to pull off the Thruway.

Most of the toll roads we visited had restaurants

and parking places, and so on. Was that what you had in mind, or was it something in addition to that?

A. No. We mainly had in mind providing sizeable parking facilities where a map of the area could be installed, which would enable the travellers to know just where they were, and if it was at a time of night when they might want to secure accommodations, by having a list of available accommodations there, it would serve a very useful purpose.

I can recall very vividly driving back from Florida last winter, and going through Georgia -- I do not believe it was a thruway -- I had to drive for an additional two or three hours before I could find any sort of accommodations at all, because I did not know the area.

It was very interesting, even when we did find a place, we settled for a place we certainly would not have otherwise.

There we knocked on the door, and a fellow stuck his hand out through the door and took the money, and told us to go to room numbered so-and-so. We thought that was a rather unusual procedure.

BY THE CHAIRMAN:

Q. I suppose your idea would be facilities where you could get gas and food, and so forth?

A. And over-night accommodations.

Q. Where there would be a list of off-highway accommodations?

A. Yes.

THE CHAIRMAN: As a matter of fact, I think that is a good idea.

THE WITNESS: I think the locations should be quite close to the entrances and exits to and from the highways, and should be easily available.

THE CHAIRMAN: Is there any further question any member of the Committee would like to ask Mr. Corbett?

BY MR. MANLEY:

Q. Mr. Corbett, you were suggesting there be an increased rate charged during the rush hours? Would that not have a tendency to penalize the commuters, who would be using the road a couple of times a day, going to and coming from work?

A. It might in a small way. The reason they suggested it was to divide the use of the road into larger areas, because I think there is nothing which discourages tourists more than becoming involved in traffic jams which might occur, and if the commuters used the other facilities which are available, it would, in all probability, balance the traffic between the two roads. It would have a tendency at least to

seek its own level.

BY MR. MacDONALD:

Q. In the United States, we found the experience of workers driving forty or fifty miles to their work and using the toll roads for a great majority of that distance. If those men were penalized mornings and evenings, it certainly would wipe out any advantage.

A. I think it would be a disadvantage if no other roads were available. It seems to me there should be several other roads which would be available.

MR. SANDERCOCK: I think it would be an unfair way of taking advantage of the working men.

BY MR. MANLEY:

Q. It might have a tendency to lose money for the toll facility.

Naturally, in operating a toll road, you need all the revenue you can get to take care of the operating costs. If you penalize the commuters mornings and evenings, they might have a tendency to use the other facilities, which might take them longer to get to and from their work, but the toll road would be losing that revenue.

A. If the flow of traffic was not too large, it would not make any difference.

BY MR. AULD:

Q. I think the practice in the United States has

been that to these high-traffic-density roads, they add an extra lane or two for ten or fifteen miles, to carry that heavy traffic.

A. That would certainly solve the problem.

THE CHAIRMAN: If there is nothing further, I would like to express our thanks to you, Mr. Corbett, and through you to your Association for appearing before us today. It has been a pleasure to have you here. We will certainly make full note of your views.

MR. CORBETT: Thank you very much, Mr. Chairman and gentlemen .

---Mr. Corbett retired.

THE CHAIRMAN: Gentlemen, there seems to be some doubt in the minds of many of the people who said they were going to appear before us as to just what information they are going to present, and what opinions they will bring.

Unfortunately, we have cancellations, but we still have enough left on the agenda to occupy us tomorrow and Friday.

We had asked the Good Roads Association to follow Mr. Corbett, but they have asked if they might appear in January, rather than at the present time.

Similarly, the County of Wentworth and the

City of Hamilton, which were to appear here this afternoon, has asked if they could not appear in January, as has the Association of Tourist Resorts, who will appear tomorrow morning.

Mr. Sedgewick, Q.C., representing Mills, Spence and Company, Limited, and Bell, Gouinlock and Company, Limited, will be here at two o'clock this afternoon. He will be presenting a financial brief, --

MR. COLLINS (Secretary): They will be here at two o'clock.

(page 535 follows)

THE CHAIRMAN: There are several letters which I think should be read to the Committee.

The first one is from the Honourable B. L. Cathcart, Minister of Travel and Publicity, which I think should be read into the record.

It says:

"I have your letter of September 26th inviting suggestions or advice on the need for Toll Roads which might be of assistance to your Committee in their deliberations.

Since there seems to be a large difference of opinion with regard to the need for Toll Roads, I feel I would be entirely out of order in speaking on whether the Province should get into the Toll Road business at this time.

With respect to my own Department there is no question but that we do derive certain benefits by Toll Roads which are in operation in the States of Pennsylvania and New York, since they do lead this way, and so doing, enables people to get into the Province with much more ease. However, once our visitors arrive in the Province, you will readily understand that we are not too anxious to hurry them through; on the other hand, I would like to point out that Toll Roads in my opinion might be of benefit to our visitors, in as much as it would seem to me that

"trucks transporting goods, or our commercial people who are anxious to get from one point to another, would use the Toll Roads and thus relieve congestion on existing highways, and thus have the effect of creating more leisurely travel.

After all, the construction of Toll Roads will not take away our existing highways and I am sure will not in anyway affect the building of more free highways for those people who are in no hurry. You will understand that my Department is more than anxious to assist in doing those things which will create more leisurely and pleasant trips for our visitors in order that they may make frequent stops for sightseeing, meals and shopping.

I hope that my expressions will be of some help to you and may I add that if I can be of assistance when your Committee is meeting, I would be only too glad to sit in and have a chat with you."

Is there any comment on that letter?

MR. MACDONALD: I think it speaks for itself. It is opposed to toll roads, because they move the traffic too fast.

MR. AULD: No, because they keep the other highways free for the tourists.

THE CHAIRMAN: I think we are in a similar position to -- what is the expression -- "being between two

mill stones".

The Honourable Minister wants the tourists to be given all facilities, and then on the other hand he does not want them to be hurried away too quickly.

MR. MacDONALD: He wants the American toll roads to speed them up here, and then have our roads slow them down.

THE CHAIRMAN: Then there follows a letter from Mr. A. C. Boak, B.Sc., and Professional Engineer. He is connected with the Non-Ferrous Castings Company, 65 Frederick Street, Toronto.

Before reading this letter I may say that we asked the Canadian Manufacturers Association if they wished to make any representations to the Committee. They, in turn, asked their members to make any comments they might wish, and this letter was written to the Canadian Manufacturers Association and, in turn, forwarded to us.

It reads as follows:

"I am glad to have the opportunity through the Canadian Manufacturers' Association to express an opinion on Toll Roads, and have the following comments to make:

1. I am definitely in favour of Toll Roads and would gladly pay a toll similar to the toll on the New York Thruway if such a road existed say from Windsor to Montreal, or

Toronto to Montreal. It is a disgrace to Canada and the Province that we do not have a better road from the Ontario-Quebec border to Windsor.

2. By waiting for taxes to be collected to build the needed roads, traffic will always be ahead of the construction whereas by raising the money by means of bonds, the roads could be built that would handle the volume for years to come and would not be at the expense of the tax-payer.
3. My last reason for favouring toll roads is strictly personal in that I would like to have the pleasure of riding on good limited access highways in my lifetime, and to wait for taxes to construct them will not make this possible.

Yours very truly,

(signed) "A. C. Boak".

I will say that Mr. Boak is nothing, if not frank.

Is there any comment on Mr. Boak's letter?

MR. YAREMKO, Q.C.: He does not say how old he is?

THE CHAIRMAN: No.

The Petroleum Association was to appear before the Committee on Friday, and I have here a letter from

them dated November 21st, 1955, which is, in my opinion, self-explanatory.

It reads:

"Dear Mr. Collings:

At the meeting of the Petroleum Association held on Thursday last, consideration was given to the appearance of this Association before the Special Committee on Toll Roads on Friday, November 25th, at 11:30 a.m.

From information gathered at this meeting it appeared that the majority of the major petroleum companies would be appearing at these hearings or would have presented by mail a written brief. In view of this fact it was the feeling of the members of this Association that our hearing for November 25th at 11:30 a.m. be cancelled, as it was thought that what the Petroleum Association might present in a brief would be a repetition of that voiced by the major petroleum companies whom you will be hearing from.

Trusting this cancellation will not inconvenience your plans too much,

Yours very truly,

(signed) 'Daniel C. Kay, Jr.'

Trade Branch Secretary."

That means, in effect, that the oil companies are going to appear individually rather than as a unit. I presume we will be hearing from them some time later.

Then there is a letter from the Ontario Good Roads Association dated November 21st, 1955, which reads:

"Dear Mr. Collins:

With reference to your recent letter I regret to state that our Executive Committee has not had sufficient time to deal with the report, which our sub-committee on Toll Roads has only recently completed.

I would suggest therefore that our presentation be postponed until after the Municipal elections in January. Hoping this suggestion meets with your approval.

Yours very truly,

(signed) 'T. J. Mahony'

Managing-Secretary
ONTARIO GOOD ROADS ASSOCIATION.

MR. CHILD: I thought there were no politics in this.

THE CHAIRMAN: One may draw one's own conclusions.

In any event, they will not appear before January. They were asked to appear before us just about now, as a matter of fact.

The Association of Tourist Resorts of Ontario

telephoned to advise that they wished to appear in January, rather than at the present time.

As far as I am concerned, I have nothing further to present to the Committee before 2:00 o'clock this afternoon.

We have some free time now. Is there anything any member of the Committee would like to raise in the meantime?

MR. ROOT: It seems to me we are going to have difficulty in getting any municipal bodies to express any opinions until after the municipal elections,

Has there been any talk of going through the province before January?

THE CHAIRMAN: That is something I think we will have to decide.

MR. ROOT: After all, we want the opinions of people, and if they are not going to be too close-mouthed for the next month or so, we might get some free expressions of opinion.

THE CHAIRMAN: At the present time, I do not think there is much point in making a tour in the month of December.

From my experience with municipal bodies, they are all engaged in nominations and elections now, plus the fact that for two or three weeks prior to Christmas,

not very much can be done, as people will not be ready to give us anything.

I would not think there was much point in our touring through the province until after the January meeting.

My thought would be to line these various people up for January, and let us see what information we get at that time, and proceed from there. I am hoping we can do that as early in January as possible.

I think we should keep in mind the possibility of submitting an interim report at the next Session of the Legislature.

I have a note here from Mr. Prentice, Vice-President of the City Service Oil Company. They are collecting a considerable amount of information for a brief to be presented in January, and they also have a film taken of the New Jersey Turnpike. Perhaps we could set up a screen here, and have that film to see what it shows.

However, that, I think, can be left with the Secretary. Is there anything further?

MR. MacDONALD: The morning's paper carried a statement by a gentleman by the name of Ash, who mentioned that on the Pennsylvania Turnpike, the death rate for 1953-1954 was higher than on the rest of the roads

throughout the State. My recollection is that was not the case.

THE CHAIRMAN: That is Mr. Ash, the President of the Shell Oil?

MR. YAREMKO, Q.C.: And of the Safety League.

MR. MacDONALD: His argument was that these thruways did not provide the proper measures of safety, and he cited the Pennsylvania Turnpike.

MR. MACKENZIE: Did he not say something about the New Jersey Turnpike as well?

MR. AULD: We were told the death rate on the New Jersey Turnpike was something like one-half of that on the other, the Pennsylvania.

MR. MacDONALD: The figure he quoted was "7.3 per 100 million miles" as compared with "5.5" for the rest of the State.

He said that in 1953, the difference was even greater.

THE CHAIRMAN: The Secretary will get the figures we were given down there, and we will have them available this afternoon.

MR. CHILD: Was it not 2.6 on the toll roads?

THE CHAIRMAN: The toll roads were much lower. The Pennsylvania was higher than the other toll roads, but that was largely due to weather conditions, and the

area they go through, more than to anything else.

MR. MacDONALD: The Pennsylvania death rate was 6.1 as compared with 4.1 on the other highways in the State.

MR. MACKENZIE: They increased their police force. I think they mentioned that.

MR. MacDONALD: Unless we got a definite wrong impression, this is not an accurate picture of the overall situation.

THE CHAIRMAN: If there is nothing further, we will adjourn until two o'clock this afternoon.

- - - - -

---Whereupon at 11:00 o'clock, a.m., the further proceedings of this Committee adjourned until this afternoon at 2:00 of the clock.

- - - - -

A F T E R N O O N S E S S I O N

Toronto, Ontario,
Wednesday, November 23rd, 1955,
2:00 o'clock, p.m.

— — — — —

The further proceedings of this Committee reconvened pursuant to adjournment.

PRESENT:

Mr. J. A. C. Auld, Acting Chairman,
Presiding.

Messrs. Yaremko, Q.C.,

Sandercock,

Child.

Root

Reaume.

Manley

MacDonald.

Mr. D. J. Collins. Secretary.

APPEARANCES:

Mr. W. Q. Macnee, Traffic Engineer, Ontario Department of Highways.

Mr. Joseph Sedgewick, Acting for Messrs. Mills, Spence, and Company, Limited, and Messrs. Bell, Gouinlock and Company, Limited, and Blyth and Company, Inc.

Mr. A. G. A. Spence, Mills, Spence and Company, Limited.

Mr. W. F. Morgan, Blyth and Company, Inc.

Colonel Percy Hampton, Bell, Gouinlock and Company, Limited.

- - - -

THE ACTING CHAIRMAN: Gentlemen, we have a quorum, and we will come to order.

Mr. Robarts had an appointment at two o'clock, and he asked me to convene this afternoon's meeting.

Mr. Sedgewick is here, representing Mills, Spence and Company, Limited, and Bell Gouinlock and Company, Limited, and I think we might listen to Mr. Sedgewick at this time.

I may say, Mr. Sedgewick, that Mr. Robarts asked me to extend his apologies to you and your associates, and to tell you that he will be here just as quickly as possible.

MR. SEDGEWICK, Q.C.: Thank you, Mr. Acting Chairman.

Gentlemen, my clients have prepared a memoranda which is being circulated, and also some supporting data, and if I may introduce the gentlemen who are with me, I should like to do so.

This is like a panel discussion; on my left

is Mr. A. G. A. Spence, Vice-President of Mills, Spence and Company of this city, upon whose letterhead this memoranda appears.

To his left, is Mr. Morgan, of Blyth and Company of New York city, about whom I shall have something to say later, as regards his expertness.

And on his left is Colonel Percy Hampton, Vice-President and Director of Bell, Gouinlock and Company, Limited, a very well-known bond house in this city.

Gentlemen, I think it would be more convenient for the Committee -- and certainly for me -- to have this put in writing, and while I will not presume to read it, I will give a quick summary, and endeavour to touch upon the highlights of it, and just skim through it, and I ask the members of the Committee to break in at any time, if you have any questions you wish to ask.

THE ACTING CHAIRMAN: That will be fine. Will you please proceed, Mr. Sedgewick?

MR. SEDGEWICK, Q.C.: Well, gentlemen, this memoranda, which is mercifully brief, contains on the first page, a statement of the qualifications of the gentlemen whom I have introduced. I do not intend to read it in full, but just point out that both of the Canadian firms are well known indeed; they have offices

across Canada, and are members of the Investment Dealers Association; Mr. Spence is a former President -- and they have been members of financing groups, and have handled municipal and government bonds in this country for over a quarter of a century.

As regards Blyth and Company; that is an investment house in New York, and they have been leaders in the financing of toll roads in that country for many years.

As the memoranda points out, they were one of the two firms which were managers of the original Pennsylvania Turnpike financing, and is still a manager of the underwriting group which has handled all of the financing of this pioneer turnpike.

Blyth and Company, Inc. was the manager of the syndicate which marketed the \$326,000,000 Ohio Turnpike financing, and has been manager of many other major turnpike financing projects, as set forth on the attached tabulation. It is of interest to note that Blyth and Company, Inc. were co-managers of the New York Thruway and Massachusetts Turnpike financing, which would serve to feed traffic to the proposed Southern Canada project, and are Financial Advisors to the Michigan Turnpike.

Then, immediately following that very brief

statement of their qualifications as financial assistants and advisors, we suggested four questions -- in reality, there are five -- which we felt we might, without offence, put before the Committee as being fundamental to your problem.

I should say we are only here to assist, if we may, in having this Committee solve a problem which some at least of my clients have been engaged in solving for many years.

The first question, and which may be trite, is:

"1. Can toll roads help solve the need for additional trunk or major arterial highways in Ontario?"

As I point out, we do not suggest an answer, but simply submit the question for the consideration of the Committee.

Then we go on with further questions:

"2. Will the prospective revenues of contemplated toll roads justify the investment required for their construction and will any routes be found whose revenues would be sufficient within an anticipated period to repay any debt incurred for their construction?

3. Can certain toll road sites be partially

self-supporting to the extent that, with a moderate degree of financial aid from gas tax revenues or other monies, they can be financed through use of provincial guaranteed or revenue bonds, thereby providing additional trunk-line highways at little or no cost to taxpayers?

4. Will toll roads be self-supporting to the extent that gasoline taxes in Ontario might conceivably be reduced?
5. Can certain high-speed highways, such as the Queen Elizabeth Way, be converted to toll highways, so that the tolls derived from the operation of such highways could then be utilized to build adjacent free highways of equal or perhaps lower standards?"

Then the brief goes on to say:

"It is suggested that neither this Committee nor any single expert or advisor can answer all these questions, but if the Committee, on the basis of its inquiries in Ontario and in other jurisdictions, concludes that toll roads are needed in this province (and that has been indicated in public announcements already made)"

We take it that the Committee has almost

reached that conclusion, from the publicity which has been given.

I do not know whether you have reached it or not, but I was quoting from the newspaper that somebody on the Committee said they thought toll roads were needed.

THE ACTING CHAIRMAN: It might depend on which newspaper you were reading.

MR. SEDGEWICK, Q.C.: I was reading the Globe and Mail. Perhaps I should not have.

However, to continue:

- "1. An outstanding firm of traffic engineers enjoying a reputation in the measuring of traffic flow and trends, to conduct a study to determine what prospective routes might provide sufficient traffic to justify construction of toll roads.
2. An outstanding firm of consulting construction engineers who, working with provincial engineering personnel, can estimate construction costs for routes which, on the basis of preliminary or final traffic data, be considered as feasible for toll road financing."

And this is where my clients come in most

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

1971-1972

actively:

"3. A group of financial firms or underwriters familiar with Ontario statutes and with toll road financing patterns in the United States, who will serve to coordinate the activities of the other groups of experts to the end that projects found to be feasible may be financed by issuance of bonds of a type to be later determined, at the most advantageous rates. Subsequently, we refer to such a group of firms as the Financial Advisor."

Now, as to the method of approach, and I just repeat that what is in this brief is based on the suggestion by Blyth and Company. They say:

"The research on this project can be divided into two distinct phases, as follows:

Preliminary - This phase includes examining available data by the traffic consultant and making preliminary estimates of construction costs by the construction engineers for possible toll roads which traffic counts indicate might be partially or wholly self-supporting. The traffic work conceivably could include making an origin and destination study at certain

specified points and then coordinating such data in order to determine on a preliminary basis whether toll roads are financially feasible."

And that, of course, is your first question.

It goes on:

"Construction engineers would also examine the costs of building such projects.

Final Phase - On the basis of the preliminary findings, a final and more complete study of the projects determined as possibly feasible on the basis of the preliminary report would be undertaken. Traffic Engineers and the Construction Engineers would make more detailed studies of traffic of the proposed line, and probably provide aerial photographs to serve as the basis for more detailed plans and specifications.

The activities of the Financial Advisor in both the preliminary and final phases would be to work with the authority in determining what projects could be financed on the basis of tolls and other available revenues. Upon the completion of the studies of traffic and civil engineering, the work of the Financial Advisor would be more

directly concerned with the financing of projects which were determined as financially feasible."

Then, under the heading of "Direct Activities of a Financial Advisor", the brief says:

"There are many duties and services which Financial Advisors to a public body must perform and perform well if the ultimate goal of successful financing is to be achieved. Among the duties and services which the undersigned, if selected as Advisors, would expect to perform are:

1. They would delegate certain of their qualified and experienced personnel to meet with the members of the Committee or a subsequent Authority, when and as often as necessary to follow developments leading to successful financing.

2. This personnel would meet with counsel to the Authority and Bond Counsel in order that all legal requirements might become known and would give such advice and assistance as might be advisable in the drafting of the Bond Resolution or Trust Agreement which would secure the proposed bonds."

Possibly at that point, if I may, I would

like to say that Mr. Morgan has brought with him a sample Trust Agreement.

MR. MORGAN: Of 140 pages.

MR. SEDGEWICK, Q.C.: I do not propose to frighten the Committee, but it is indicative of how much time has been spent on this kind of financing.

The document is a printed volume of 140 pages and is a Trust Agreement between the Florida State Turnpike Authority and the First National Bank of Miami, as Trustee, and the Miami Beach First National Bank as co-trustee. It is dated the 1st of April, 1955.

It is financing with which my clients are concerned, and I thought we might usefully leave these with the Committee, being documents which governed some of the toll-road financing in the States.

This goes on:

"3. They would meet with the Authority's Consulting Engineers when and as often as advisable and necessary in order that their report covering construction costs and estimates of operation and maintenance costs might be completely satisfactory."

In that connection, Mr. Morgan has brought with him, a document which I would also like to leave with the Committee, if I may. It is in connection

with the Florida State Turnpike Authority in what is known as the "Sunshine State", between Miami and Fort Pearce.

This is a report showing the route locations and so forth. It is dated February, 1955, and was prepared by Messrs. Howard, Neeles, Tammen and Bergendoff. whom I understand are specialists in surveys of this kind. It is a beautiful document, with pictures, and so forth, and I thought it might be useful to the Committee, if I might leave it with you.

I would also like to leave with the Committee just a sample of the kind of work which has been done in that connection. It is a very interesting volume prepared for the Florida State Turnpike Authority, and the State Road Department of Florida, and is dated March 15th, 1954.

As the members of the Committee will see, this is not the kind of a document someone might prepare during some idle evening; it is a very comprehensive document, and is filed, not as anything conclusive, but as an example of the kind of studies which must be made if these projects are to be successfully financed, because, of course, the financing of these projects rests upon the traffic and the construction organization.

The memoranda goes on:

"They would meet when and as often as necessary with the Authority's Traffic Engineers in order that they might analyze their report covering estimated traffic and earnings for the project.

"After a complete understanding had been reached through study and investigation of all of the pertinent data, they would determine the financial feasibility of the project and make recommendations which would produce the most attractive financing plan for the Authority.

In connection with such plan, they would determine and recommend the principal amount of bonds to be issued, the application of revenues, the amount of required reserves and other pertinent phases of the financing programme which would provide a sound security for the bonds."

May I interpolate there and say that gave us the key to our thinking. There is all the difference in the world between borrowing 3 percent. and 5 percent. money, as you can readily understand.

"They would prepare an Official Statement incorporating all essential information in order that the bonds might be accurately described, all with a view of enabling the Authority to obtain the lowest possible cost of financing."

I would like to file these all together.

I have seven documents and official statements. I will just run over them. One is the Florida State, in regard to \$74,000,000 at $3\frac{1}{4}$ percent.

The second is the Massachusetts Turnpike, \$239,000,000, at 3.30 percent.

The third is the Richmond-Peterburg Turnpike, \$69,000,000, at 3.45 percent.

The next one is the Illinois Commission, \$415,000,000 at 3-3/4 percent.

The next is the State of Ohio, with \$326,000,000, at $3\frac{1}{4}$ percent., revenue bonds.

The next is the Commonwealth of Pennsylvania, which is \$233,000,000, at 3.10 percent.

The next one is the New York State Thruway, \$300,000,000 at 3.10 percent. The yield runs from a yield rate of 2 percent. to a high of 2.85 percent., depending on the terms of the bonds, and I thought it might be useful if I filed these.

My understanding is that my clients were concerned with all of this financing, and the Committee will observe they do vary in yield by almost a full point.

And what I said earlier applies, that the better the job which is done in the preliminary stages, the better the chances of marketing these revenue bonds

most advantageously, and when one is dealing with amounts of from \$300,000,000 to \$400,000,000, or even more, a half a point or a quarter of a point is a considerable sum of money.

If I may leave these with the Committee, I will be glad to do so. I do not know to what extent the Committee has documents of this kind, but I thought they might be useful, because they are all current, and the bonds have been issued within the past two or three years, in fact, many of them this year, and I think they contain useful comparative information.

"They would submit all of the detailed information, including legal documents, traffic reports, engineers' reports and the Official Statement to the bond rating agencies and be available to discuss with them the merit and security of the bonds with a view to obtaining from them the best possible credit rating or, in the absence of a rating, the best possible comment."

That, of course, is directed to see that the bonds sell easily, and sell at about par.

Mr. Morgan has also brought with him -- and I think I could usefully leave this with the Committee -- a sample Bill of the State of Florida, setting up their Turnpike Authority.

I am not suggesting if such an Authority should be set up in Toronto, following whatever recommendations you gentlemen may make, that you would follow precisely this form, but it does give you the legislative experience in a state not unlike our own, which has faced similar problems.

The memoranda goes on:

"They would make advance presentations to a selected list of institutions and other large investors in order to ascertain and develop their interest in investing in the bonds of the project.

"They would offer their full and complete co-operation to the Authority and its staff and expect that they, in turn, would receive the co-operation of the Authority, its Counsel, its Consulting Engineers, its Traffic Engineers and any other persons working for or representing the Authority in any aspect of the financing plan."

If this Committee should recommend the group for whom I am acting be selected as advisors, they would assign at least two Canadian and two American members of their respective staffs to be available to meet with the Authority whenever occasion

demanded or when meetings are to be held. The Canadians to be assigned would be wholly familiar with toll road techniques and methods of financing. The latter would have many years of experience in all types of revenue bond financing for self-supporting projects -- and it sincerely hoped it will -- and would be considered as experts in this field.

The Americans assigned to this project will either be taken from the New York or Chicago staffs of Blyth & Co., Inc., and will work directly under Mr. T. Henry Boyd, Vice-President of Blyth & Co., Inc., and considered one of the leaders in the toll road financing field because of his direction of financing for the Ohio, Pennsylvania, Massachusetts, Michigan, Florida, and other toll road projects. Mr. Boyd will be in constant supervision of the project from the Financial Advisor's end, and will attend meetings of the Authority or Committee whenever occasion demanded. Present intentions are also to assign Mr. William F. Morgan of Blyth & Co., Inc.'s New York staff to the project if this proposal is accepted, -- by that I mean if my clients are selected, of course. Additional personnel would be available whenever required. A biographical statement of Mr. Morgan is attached to this proposal, as well as a recent article written by him which will

appear in the January, 1956 edition of "Traffic Quarterly".

I am filing a biographical sketch of Mr. Morgan's position in this important field:

"STATEMENT OF EDUCATION, EXPERIENCE, AND ACTIVITIES
OF W. F. MORGAN

Present Position

Assistant Manager, Buying Department, Blyth & Co., Inc.

Education

A. B. in Economics (with Distinction), University of Michigan, 1935.

M. B. A. in Business Administration (with Distinction) University of Michigan, 1936.

Honorary and Technical Society Memberships

Phi Beta Kappa-National Honorary Scholastic Society.

Phi Kappa Phi-National Honorary Scholastic Society.

Beta Gamma Sigma-National Business Society

C. P. A. - Wisconsin - 1948

American Institute of Accountants.

Experience

Investment Counsel, Inc. Six years during the period 1936-1942. Began work as junior stock statistician, later transferred to buying of

municipal bonds for Union Guardian Trust Company, and thirty-five banks, insurance companies, and individuals. In this period became active in buying of revenue bonds, then a comparatively new field, and in Canadian bonds.

War Department, Detroit Ordinance District - 1942-1944. Worked as Senior Accountant, Price Adjustment Section in renegotiation work. Served as section head over ten accountants and financial analysts in activities concerned with recapture of war profits by contractors engaged in defense activities.

Northwestern Mutual Life Insurance Company, Milwaukee - 1945-1953. Starting as financial analyst, in 1949 assumed charge of municipal and revenue bond portfolio amounting to over one-quarter billion dollars, and over 150 different issues. Did much buying of Canadian provincial and municipal obligations during this period. Specialized in revenue bonds with emphasis on setting up indentures, analysis of engineering reports, and purchase of turnpike and toll bridge revenue bonds.

Rlyth & Co., Inc., New York - 1953-1955.
Became a buyer in Municipal Bond Department

specializing in setting up revenue and turnpike bond financing. Was actively engaged in preparing various official statements, engineers reports, and other activities in connection with financing of \$233 Million Pennsylvania Turnpike issue (1954), \$239 Million Massachusetts Turnpike Issue (1954), \$300 Million New York Thruway (1954), \$75 Million Florida Turnpike (1955), \$70 Million Richmond-Petersburg Turnpike (1955), and other smaller issues.

Publications - Articles for Traffic Quarterly, Journal of Accountancy, and other publications."

I am also filing the article I referred to previously, written by Mr. Morgan and which will appear in the January, 1956 edition of "Traffic Quarterly".

"

FINANCING TOLL BRIDGES, TURNPIKES AND PARKING PROJECTS BY USE OF REVENUE BONDS

By William F. Morgan,
Blyth & Co., Inc.

In 1954, there were sold in the United States over \$3.2 billion of municipal revenue bonds. While many types of projects were represented in this total, over 50% (approximately \$1.7 billion) of this total was represented by toll road projects secured by the net revenues derived from the operation of such facilities. The total of

parking revenue bonds in this total is relatively small, but such projects are being financed using tax exempt municipal revenue bonds with increasing frequency.

In preparing to finance toll type projects -- whether or not they represent the obligations of a highway or parking project makes little difference -- the civic group or authority spark-plugging such activity finds itself constantly facing the point of view of the (1) issuer or citizenry who will use or be affected by the project, and (2) the ultimate investor whose purchases of revenue bonds of the project make it possible. Because such projects depend solely on the earning power of the $\frac{1}{2}$ projects being financed, it is necessary that many safeguards and factors be considered when revenue bonds are to be utilized. The conflicting views of the issuer and the investor must constantly be reconciled, compromised, or in some manner disposed of. Because of the writer's background, he undoubtedly will appear biased in these remarks in favor of the ultimate investor, but the fact must never be overlooked that the investor must be satisfied or the project cannot be financed in this manner.

Getting the Project Under Way

A city decides to build a new parking garage, a state a new toll highway, a county or district a new toll bridge. What are the steps to be taken before the revenue bonds are finally sold which will provide the money required to finance the project?

Legislation and Legal Counsel

Behind every toll project financed with municipal revenue bonds, there is some basic legislation at the state level which makes the project possible. In some states the legislation may be general in scope so that it may be utilized for projects such as parking garages or lots financed by many separate communities. For such projects as toll roads and toll bridges, however, usually special legislation is required which pertains to and applies only to a particular project.

Experienced legal counsel will remove many headaches and later problems if it is engaged before legislation is proposed. Counsel who are experienced and who have worked upon legislation for such projects as toll roads and bridges in other states, and are familiar with state legislation and laws, will know whether existing legislation, for example, applicable to the right of eminent

domain will enable a toll road authority to secure property rapidly enough to enable the project to be built with speed and dispatch. Legal counsel will also know that the independent authority or commission type of governing body is more acceptable to major buyers of revenue bonds. He also realizes from his experience working on other projects that an independent trustee is more acceptable to such investors than a state or city treasurer, for example, so far as taking care of a project's construction funds or revenues are concerned. Such counsel's experience in other similar projects will prove invaluable in seeing that enabling legislation contains all the provisions, safeguards and leeways to enable counsel later to draw up a bond resolution or trust indenture which is satisfactory both to the issuer of revenue bonds and ultimate investors in such issues. It cannot be emphasized too strongly that experienced legal advice from competent bond counsel should start when a project is in the planning or legislation stage. Counsel will also be needed at many other steps along the path towards issuance of revenue bonds.

Recently, a certain city proposed to pledge

revenue from its parking meter revenues to a bond issue providing for off-street parking within the city. Feasibility reports had been prepared, architects had finished their plans, and consideration was being given to preparing a bond resolution. However, no one had taken the trouble to check with bond counsel to find out that there was missing the necessary legislation enabling the city to pledge the parking meter revenues to the bonds. Thus, before the project can now be financed it will be necessary to await the state legislature's meeting in 1957. This is one example -- and many more can be cited -- as to why counsel should be consulted early and along every step of the way towards financing a project.

Selection of Management

The legislation providing the legal foundation for a future issue of revenue bonds usually provides for a managing group or administrative body to be appointed, to construct and operate the project. Such legislation usually provides for an independent authority or commission to be appointed consisting of at least three members. In certain instances the members serve without

pay, whereas in others the chairman only, or perhaps all members may be compensated for their activities.

The selection of a hard-working vigorous commission for management of a large project appears as an essential in providing for its success. Besides the usual meetings (for example, the Ohio Turnpike Commission has had over 200 meetings since it was organized some six years ago), there are numerous conferences with lawyers, engineers, legislators and others which must be attended. The complaints of people whose land is being taken, and who want the project, but want it located anywhere but within one-quarter mile of their house (where it is planned) must be heard and resolved as amicably as possible. Mayors and communities and property owners opposed to a project must have their day when they can vent their objections, and be given a chance to make suggestions. The press has to be constantly advised and informed of progress of a project. Attention must be paid to legal matters and law-suits which seem to plague every large project these days.

Observation of the activities of several of

the commissions running major construction type projects indicate that the key man or chairman finds his appointment to be a full-time, 24 hour-per-day job. While he may find time to carry on his usual business in his spare time, he cannot escape finding a major portion of his efforts devoted to this job which he perhaps accepted because of the pleas of a governor or mayor. The most exacting demands of such positions seem to require people endowed with qualities of a politician-lawyer-engineer-what have you, rolled all into one person.

Selection of Engineers

The newly-appointed authority or commission will find, after it has selected its own paid personnel consisting of clerks, administrative assistants, engineers, public relations people, and other personnel, that it must set forth on the task of finding out two things -- (1) what it will cost to build and operate the project, and (2) what the project will earn in revenues. It must select consulting or civil engineers to determine the costs of construction, design and layout of the project, and estimate its operating costs after opening. Traffic engineers will be

required to determine the volume of traffic, or use of a project, and estimate the revenues it will earn. For utility projects such as those concerned with water or electric operations, one engineering firm usually takes the responsibility for both the construction and revenue phases of a study. In the case of traffic, bridge, or parking facilities, where substantial sums of money are involved in payments to engineering firms for design and supervision of construction, major institutional investors have come to insist on the two phases of this work being conducted by at least two independent firms.

It is customary for the traffic and civil engineers to make preliminary reports based on readily available information in order to determine whether a project at first glance has a possibility of being financed. After the preliminary reports have been prepared it is possible for an Authority to determine whether it should spend the money for the more expensive and more thorough final reports which serve as the basis for revenue bond financing.

Traffic Engineers

Financial institutions who are major buyers of revenue bonds supported by construction projects,

have become thoroughly familiar with reports estimating future revenues of construction projects. Because of the backlog of information they have accumulated in their files, they expect fairly complete information with respect to the traffic and revenue outlook for specific projects. While they realize to some degree that the traffic engineer has to use a 'crystal-ball' approach, they also expect to find upon reading his report that he has made origin and destination studies, how much traffic he expects will be diverted to the new project, and on what basis the so-called 'induced' or new traffic resulting from the fact the project is being built has been estimated. These are only some examples of some of the background information desirable to be included in traffic reports. Similar data should also be included in reports for parking or other type of projects to the extent practicable.

The writer has seen some instances where the scope of traffic reports is determined by the amount of money which an Authority will spend for such a report. It cannot be emphasized too strongly that such a report, when completed, should contain all the information necessary to show the

sophisticated investors not only estimated traffic and revenues, but also the basis for such estimates. Thus, the cost of a report should be based on whatever is necessary to do an adequate job rather than any economy considerations. These days, unless reports are adequate, buyers have an inclination to throw the report aside and turn their attention to other projects. The volume of revenue financing today is large enough so that unless adequate background information is available, the major buyers of revenue bonds will await projects upon which such data is furnished.

Consulting or Civil Engineers

The consulting or civil engineer is charged with the responsibility of drawing the plans, determining the design, supervising the construction, and estimating the cost and operating expenses of the project. When bridges, tunnels or parking projects are being considered for financing, usually he proceeds to the point of making final plans and even receiving final construction bids before a project is financed. The total cost of a project on an estimated basis, or as determined by actual bids for a major portion of construction, are essential in determining the amount of bonds

to be issued. Because of the cost of final construction plans, in very large turnpike projects the engineers have to use preliminary data, photogrammetric maps, and rely to an important extent on state highway data in order to determine estimated costs. The civil engineer also has to work closely with the traffic engineer in determining the location of a project, because it is well-known that a project located where no one wants to use it has little chance of success. Like the traffic engineer, the consulting engineer prepares a written report which is made available to prospective investors in revenue bonds.

Fiscal Advisors or Underwriters

The next step for the new Authority is to select financial advisors or an underwriting firm or group to work with the Authority in coordinating the engineering and the preparation of trust indentures and other documents required for financing. The financing expert should be engaged at least by the time the preliminary feasibility reports are complete, since his judgment will prove most helpful in determining whether to go to the expense of securing the final engineering feasibility reports.

In relatively small projects, the financial advisor will be paid a fee for his activities which usually include, in addition to those described above, the preparation of a financial brochure, usually known in financial circles as an Official Statement. The proposed bond issue, in case of smaller issues, may be offered at competitive bidding. In such instances, the financial firm who prepared the document may, or may not, be given the right to bid for the bonds when they are so offered. In large projects where, due to the very size of the issue, only one bid for the bonds appears possible, the financial firm or firms doing this task usually serve in the capacity of an underwriter, and are compensated for their activities in the underwriting 'spread', or commission charged for underwriting the bonds. This paper will not discuss' the question of whether or not revenue bonds should be sold at competitive or negotiated sale.

Because of experience gained in otherprojects, the financial advisor frequently is able to point out methods of procedure which will facilitate development of a project. It should not be overlooked that sooner or later a project is expected

to result in revenue bonds being sold. In accordance with this thinking, it appears advisable to have an experienced revenue bond firm as one member of an Authority's team of experts as soon as possible. Their 'know-how' should prove a valuable crutch upon which the Authority can lean during the period prior to sale of revenue bonds.

Coverage of Debt Service

The Authority's team of experts is functioning, engineering reports are either in progress or have been completed, and the bond counsel has prepared drafts of the necessary legal papers. Perhaps the financial advisor has worked up rough drafts of the Official Statement. It now becomes necessary to coordinate all of these activities in order to provide revenue bond buyers with the information upon which they say, 'yes, we are interested in your issue, if the price is right', or they sometimes say, 'no, we don't like the issue because.....' and in the latter case there can be any number of reasons.

The buyers of revenue bonds have to be satisfied: (1) that their rights are protected by the trust agreements or bond resolutions (prepared by legal counsel), (2) that the engineering reports

(prepared by the traffic and civil engineers) have been carefully done and properly documented, and (3) that the Official Statement (prepared by the financial advisor) contains sufficient information for them to formulate a comprehensive opinion of the project, the risks involved, and its prospects for success. Success to them in large measure means the ability to pay debt service on the revenue bonds which finance the project. After buyers are satisfied with the data summarized in the preceding paragraph, they will consider the 'coverage' of interest and principal on the proposed bond issue. Just what is acceptable coverage varies as between buyers and between different types of projects. While low coverage would be acceptable for a water revenue bond, a somewhat higher level would be required for a toll road bond, or a parking revenue bond. However, toll road bonds, and other dependent on automobile or truck traffic, to some degree are based on future growth of traffic. Such growth has been substantial in the past, and there appears no basis yet for feeling that the upward trend will not continue.

Although coverage of debt service is important,

it is far from being the only one considered by a buyer of municipal revenue bonds. Sometimes he will require a higher coverage for a project servicing a resort area subject to vacation traffic, than one (say) servicing major cities and dependent largely on day-to-day commuter type traffic. Any buyer can think of at least a dozen reasons for looking for a higher coverage for one project as compared to another.

The variance between various toll road and bridge projects, and the estimates of revenues as of the date of financing, all as set forth in the Official Statements of projects, are set forth below, and will give an idea of the amount of coverage which buyers have required in the past in financing major traffic-type projects:

(page 579 follows)

<u>Issue</u>	<u>Size of Issue in Millions</u>	<u>When Offered</u>	<u>Approx. Offering Interest Yield</u>	<u>Est. Payout of Bonds</u>	<u>Estimated by 2nd year's revenues of maximum Interest</u>	<u>Coverage Debt Service</u>
<u>Turnpikes</u>						
West Virginia	96	4/7/52	3.80	25	1.06	N.A.
Ohio	326	6/3/52	3.25	18	1.81	1.15
Maine	75	4/23/53	4.00	20	1.35	.77
New Jersey	150	10/4/53	3.40	N.A.	2.02	1.00
Indiana	280	12/17/53	3.50	22	1.47	1.01
Massachusetts	239	5/4/54	3.30	21	1.65	1.14
Kentucky	38.5	6/8/54	3.40	20	1.75	1.24
Kansas	160	9/22/54	3.40	21	1.41	0.97
Florida	74	6/7/55	3.25	17	2.11	1.47
Texas	58.5	6/15/55	2.90	18	2.09	1.17
<u>Toll Bridges, etc.</u>						
Chesapeake Bay	37.5	10/18/48	3.10	14	3.26	1.49
California Toll	62.	12/20/52	3.60	27	1.15	.73
Delaware River Port Auth.	100.	5/21/53	3.37	N.A.	2.33	1.33
Mississippi River Bridge	65	10/6/54	3.48	24	1.51	0.96
Virginia Toll Road	95	10/27/54	3.05	24	1.64	.88
Maryland Bridge	180	11/9/54	2.95*	18	2.29	1.44
Calument Skyway	88	12/22/54	3.37	26	1.40	.79
N.A. Not applicable.						

* For 144,000,000 term bonds of issue.

It is obvious from the above table that while there is some correlation between the coverage of interest in the second year and the interest rate, other factors must also be considered. For example, the coverage on the Florida Turnpike issue shown above is approximately that available on the Texas Turnpike issue. These two issues were sold within one week of each other, and hence enjoyed approximately the same bond market. However, the Florida bonds were offered to yield 3.25%, while the Texas issue yielded only 2.90%. Why the substantial difference in interest rate?

To some extent, the answer lies in the fact, at least in the opinion of the writer, that the Florida issue represented only the first segment of a very large issue and additional bonds could be issued under the same lien position. The Florida buyer had to anticipate another bond issue or issues having the same lien position, thereby, in his opinion, increasing his risk. Meanwhile, the Texas issue had a closed first lien position on what amounts to a bridge between downtown Dallas and downtown Fort Worth. Although both bonds were well set up, and both were based on traffic and civil engineering reports by the same

group of engineers, the professional buyers felt the Texas bonds were entitled to a lower yield than the Florida issue, even though both issues represent good value. The comparing of issues in such a manner absorbs considerable time both by buyers and the underwriters of revenue bonds.

Other Steps

Having determined that an issue can likely be sold, the 'team' working towards issuance of a revenue bond issue has several other steps to take. Some of these steps can be summarized as follows:

1. Determining a sales date for the bonds.
2. Mailing of Official Statements, engineers' reports, Trust Indentures, and other data to prospective buyers and underwriters.
3. Securing any necessary legal approvals, and preparation of preliminary legal opinions, blue sky opinions, etc.
4. Attending and arranging for public information meetings, which invariably for large issues include a meeting in New York.
5. Answering questions for large investors and others who sometimes require information other than that included in the documents summarized above.

6. Contacting and advising the rating agencies with respect to the proposed bond issue.
7. Arranging for inspection trips for prospective investors to the site of the proposed project.
8. Arranging for the printing of the bonds, and a delivery date for the bonds, providing the offering is sold.
9. Making an award of the bonds to the successful group of underwriters, in case of public sale, or to the syndicate negotiating for sale of the bonds, in case of a negotiated sale.

The several steps set forth above represent a very brief summary of some activities which take much time and effort and to a large extent are handled by the financial advisor or underwriter for an Authority. It is the type of effort which requires expert guidance and assistance by those accustomed to dealing with such matters.

Summary:

This paper has attempted to show in summary some of the steps to be taken by an Authority or Commission in its efforts towards financing a

large project by the issuance of municipal tax-exempt revenue bonds. For somewhat similar issues certain of the steps set forth above can either be eliminated or on occasion can be done by use of a minimum effort. However, it cannot be repeated too often that behind every successful sale of a large revenue bond issue that there is represented effort on the part of a great many people. As in all other activities requiring team work and cooperation, the most successful jobs done in this field are usually based on the concerted working together of engineers, lawyers and financial people who have become experts in their particular field of activity."

This has not been published as yet, and is not available to the reading public, but it is based on Mr. Morgan's long experience with Blyth and Company, and I think the Committee might like to have it before it.

(Page 584 follows)

BLYTH & CO. INC.,

14 Wall Street,

New York 5, N. Y.

History: The business of Blyth & Co., Inc. was formed in 1914. Three of the founders are currently active in the business as principal officers and stockholders.

Statistics: Capital and Surplus \$17,700,000

23 offices -- 580 employees.

1954 business volume:

Securities handled -- \$1,200,000,000

Number of transactions handled -- 401,000

Corporate underwritings managed - \$623,000,000

Municipal and Revenue bond underwritings managed -- \$1,610,000,000

The following list is a record of Revenue Bond financing undertaken by Blyth & Co. Inc. from 1935 to date. In all of these issues we had a major underwriting position.

* * * * * * * * * * * * * * * * *

1 9 3 5

* \$7,722,000 Commonwealth of Kentucky - Department of Highways Revenue Bonds.

* 4,435,000 Louisville, Ky. Bridge Revenue Bonds

22,709,000 Los Angeles Cal. Department of Water & Power Electric Plant Revenue Bonds.

34,300,000 Port of New York Authority General & Refunding (Midtown Tunnel, etc.)

1 9 3 6

- * 5,465,000 Commonwealth of Kentucky Bridge Revenue Bonds
- * 4,400,000 Louisville, Ky. Bridge Revenue Bonds
- * 10,000,000 Port of New York Authority General & Refunding Bonds.

1 9 3 7

- 47,000,000 Los Angeles, Cal. Department of Water & Power Electric Plant Revenue Bonds
- 25,000,000 Triborough Bridge Authority Revenue Bonds
- * 2,100,000 Commonwealth of Kentucky Bridge Revenue Bonds
- 28,000,000 Triborough Bridge Authority Revenue Bonds.

1 9 3 8

- * 6,000,000 Knoxville, Tennessee Electric Revenue Bonds

1 9 3 9

- * 71,000,000 California Toll Bridge Authority - San Francisco Oakland Bay Bridge Revenue
- * 3,670,000 Louisville, Ky. Bridge Revenue Bonds.

1 9 4 0

- 96,500,000 Triborough Bridge Authority Revenue Bonds
- * 10,000,000 Pennsylvania Turnpike Revenue Bonds
- * 5,000,000 Pennsylvania Turnpike Revenue Bonds
- 5,900,000 Washington Toll Bridge Authority Bridge Revenue Bonds
- 5,800,000 Pennsylvania Turnpike Revenue Bonds

1940 (cont'd)

42,592,000 Los Angeles Department of Water & Power
Electric Plant Revenue Bonds

* 9,000,000 Port of New York Authority General &
Refunding Bonds Fourth Series

1941

3,750,000 Washington Toll Bridge Authority Revenue
Bonds

* 3,000,000 Westchester County Cross County Parkway
Toll Bridge Revenue Bonds

1942

* 17,500,000 Cleveland, Ohio Railway Transportation
System Revenue Bonds

1943

16,848,000 Lower Colorado River Authority, Texas
Electric Revenue Bonds

37,000,000 Delaware River Joint Commission, Philadelphia-
Camden Bridge Revenue Bonds

* 6,000,000 Imperial Irrigation District, Cal. Electric
Revenue Bonds.

1944

* 56,000,000 California Toll Bridge Authority, San
Francisco-Oakland Bay Bridge

* 41,000,000 Consumers Public Power District, Nebraska
Electric Revenue Bonds

4,815,000 Washington Toll Bridge Authority Bridge
Revenue Bonds

* 2,800,000 Dubuque Bridge Commission, Iowa Bridge
Revenue Bonds

* 6,000,000 Seattle, Washington Municipal Transpor-
tation Revenue Bonds.

1 9 4 5

13,200,000 Los Angeles Department of Water & Power
Electric Plant Revenue Bonds

* 10,000,000 Miami, Florida Water Revenue Bonds

110,000,000 Triborough Bridge Authority Revenue Bonds

* 12,000,000 Port of New York Authority General &
Refunding 9th Series.

1 9 4 6

* 6,200,000 Imperial Irrigation District, Cal. Electric
Revenue Bonds

* 2,900,000 Buffalo & Fort Erie Bridge Authority
Revenue Bonds

* 18,757,000 Port of New York Authority General &
Refunding 11th Series

1 9 4 7

* 46,000,000 Pennsylvania Turnpike Revenue Bonds

50,000,000 Puerto Rico Water Resources Authority
Electric Revenue

* 105,000,000 Chicago Transit Authority Revenue

27,000,000 Mystic River Bridge Authority, Mass.
Bridge Revenue.

1 9 4 8

40,000,000 Delaware Memorial Bridge Revenue

* 134,000,000 Pennsylvania Turnpike Refunding and
Philadelphia Extension Revenue.

1 9 4 9

* 550,000 Springfield, Ill. Water Revenue

1949 (cont'd)

4,000,000	Louisville & Jefferson County, Ky. Metropolitan Sewer
* 5,000,000	Mobile, Ala. Tunnel Revenue
* 19,000,000	Virginia Bridge Toll Revenue
* 14,700,000	Loup River Public Power District
* 2,000,000	Eugene, Ore. Water & Electric Revenue
3,375,000	Akron, Ohio Sewer Revenue
* 50,000,000	Louisiana Veterans Bonus
40,000,000	Los Angeles Department of Water & Power Electric Plant Revenue Bonds
141,500,000	Triborough Bridge & Tunnel Authority
17,700,000	Lower Colorado River Authority, Texas
* 77,500,000	Pennsylvania Turnpike Revenue Bonds
6,425,000	Maryland Bridge Revenue
20,000,000	Los Angeles Department of Water & Power Electric Plant Revenue Bonds
* 54,000,000	Port of New York Authority General & Refunding.

1950

* 6,000,000	Imperial Irrigation District Electric Revenue Bonds
24,350,000	Westmoreland, Pa. Water Revenue
6,000,000	University System Building Authority of Georgia Revenue
28,000,000	Florida State Improvement Commission
* 8,000,000	Tacoma Light & Power Revenue
* 15,000,000	Seattle Electric Light & Power Revenue Bonds

1950 (cont'd)

- * 4,000,000 Tacoma Light & Power Revenue
- 2,250,000 Kent County, R. I. Water Authority.

1951

- 8,350,000 California Toll Bridge - San Mateo Toll Bridge Revenue
- * 35,000,000 New Jersey Turnpike Authority Bonds
- * 113,041,000 New Housing Authority Bonds
- * 80,000,000 State of Michigan Highway Revenue Bonds
- * 5,844,000 Public Utility District # 1 of Cowlitz County, Michigan
- * 6,000,000 University System Building Authority, Georgia
- * 155,739,000 New Housing Authority
- * 6,500,000 Imperial Irrigation District Cal. Electric Revenue
- * 21,000,000 California Toll Bridge Authority - San Francisco Oakland Bay Toll Bridge
- * 3,750,000 Kansas City, Mo. Water Revenue Bonds.

1952

- * 28,000,000 Seattle, Washington Light & Power Revenue Bonds
- * 118,036,000 New Housing Authority Bonds
- 215,000,000 Triborough Bridge & Tunnel Authority
- * 5,000,000 Los Angeles Dept. of Light and Power
- * 17,000,000 Omaha Public Power Dist. Electric Revenue
- 40,000,000 General State Authority Pennsylvania

1952 (cont'd)

- * 21,700,000 State of Montana Revenue Bonds
- * 3,235,000 Louisiana State University A & M. College
- * 326,000,000 Ohio Turnpike Revenue Bonds
- 2,000,000 Jefferson County, Kentucky School Revenue Bonds
- 3,500,000 Flint, Michigan Water Revenue Bonds
- * 32,097,000 State School Building Authority of Georgia
- * 65,000,000 Pennsylvania Turnpike Revenue Bonds
- * 170,719,000 New Housing Authority
- * 23,000,000 Chicago Transit Authority Revenue Bonds
- * 62,000,000 California Toll Bridge (Richmond-San Raphael Bridge) Revenue Bridge
- * 35,000,000 Port of New York Authority Revenue Bonds
- * 23,000,000 Chicago Transit Authority Revenue Bonds
- 22,600,000 Chicago Illinois Parking Facility Revenue Bonds.

1953

- * 5,000,000 Los Angeles Department of Water & Power
- * 16,200,000 New Housing Authority Bonds
- 3,850,000 University of Maryland, Revenue Bonds
- * 10,500,000 State Hospital Authority of Georgia, Revenue Bonds.
- * 3,000,000 Atlanta, Georgia, Waterworks Revenue Bonds
- * 7,500,000 University System Building Authority of Ga., Revenue Bonds
- * 8,500,000 Kansas City, Mo., Water Revenue Bonds

1 9 5 3 (cont'd)

- 100,000,000 Delaware River Port Authority Revenue Bonds
- * 122,515,000 New Housing Authority Bonds
- * 3,700,000 Mobile, Ala., Water Revenue Bonds
- * 27,100,000 Miami, Fla., Sewerage Disposal and Sewer Revenue Bonds
- 21,000,000 Puerto Rico Water Resources Authority Water Revenue Bonds
- 150,000,000 New Jersey Garden State Parkway Bonds
- * 5,000,000 Knoxville, Tenn., Sewer Revenue Bonds
- * 1,850,000 West Chester, Pa., Joint School Authority
- * 63,300,000 State School Building Authority of Georgia
- * 27,000,000 State of Washington Motor Vehicle Fuel Tax Revenue Bonds
- * 3,200,000 East Penn. Pa., School Building Authority Revenue Bonds
- * 102,000,000 New Housing Authority Bonds
- * 9,800,000 State Office Building Authority of Ga., Revenue Bonds
- * 20,000,000 Los Angeles Department of Water and Power Revenue Bonds
- 150,000,000 New Jersey Turnpike Authority Revenue Bonds 2nd Series
- * 3,000,000 San Francisco - Oakland Bay Bridge
- 3,000,000 Flint, Michigan Water Revenue Bonds
- * 2,400,000 Albuquerque New Mexico Water and Sewer Revenue Bonds

1 9 5 4

- * 32,512,000 State School Building Authority of Georgia, Revenue Bonds
- * 107,000,000 New Housing Authority Bonds
- * 233,000,000 Pennsylvania Turnpike Commission Revenue Bonds
- * 239,000,000 Massachusetts Turnpike Authority, Revenue Bonds
- * 3,940,000 Jefferson County, Kentucky School Revenue Bonds
- * 10,250,000 The Trustees of Purdue University Student Unions-Hall of Music Bonds of 1954
- * 4,900,000 Chicago, Illinois Parking Facility Revenue Bonds
- * 6,000,000 Richmond, Indiana Electric Revenue Bonds
- * 4,361,000 Kentucky Bridge Revenue Bonds Project # 18
- * 38,500,000 Kentucky Turnpike Revenue Bonds (Series 1954)
- * 300,000,000 New York State Thruway Authority General Revenue Bonds, Series A
- * 8,000,000 Louisville and Jefferson County Metropolitan Sewer District, Ky.
- 100,000,000 Connecticut Expressway Revenue Bonds
- * 38,500,000 Kentucky Turnpike Revenue Bonds
- * 300,000,000 New York State Thruway Authority
- * 9,200,000 North Texas Municipal Water District
- * 65,000,000 Mississippi River Bridge Authority, Louisiana Revenue Bonds
- * 20,000,000 New Jersey Highway Authority Revenue Bonds
- 335,000,000 New York State Power Authority Revenue Bonds

1954 (cont'd)

* 88,000,000 Chicago Calumet Skyway Bridge
Revenue Bonds

1955

* 2,500,000 Purdue University

* 34,000,000 New Jersey Turnpike Authority

* 111,980,000 Local Housing Authorities

* 29,238,000 Georgia State School Building Authority

50,000,000 Pennsylvania General State Authority

* 6,600,000 Washington Township -- Marion County
School Building Corporation

* 100,870,000 Local Housing Authorities

* 52,000,000 Ohio Major Thoroughfare bonds

* 69,000,000 Richmond -- Petersburg Turnpike
Authorities

50,000,000 New York State Thruway Authority

415,000,000 Illinois State Toll Road Authority

** 74,000,000 Florida Turnpike Authority

- - - - -

* Those issues marked with an asterisk were either
solely or jointly managed by Blyth & Co., Inc.

** As financial agents. Did not participate in the
underwriting.

TURNPIKE FINANCING IN THE UNITED STATES

BLYTH AND CO., INC. POSITION IN SUCH FINANCING

(1940 to November, 1955, inclusive)

Date	Size of Issue	Issue	Coupon Rate	Maturity	Blyth's Position was	
					Manager	Major
Apr. 1940	\$ 10,000,000*	Pennsylvania Turnpike Commission	3 3/4	1968		x
July 1940	5,000,000*	Pennsylvania Turnpike Commission	3 3/4	1968		x
Sept. 1940	5,800,000*	Pennsylvania Turnpike Commission	3 3/4	1968		x
Dec. 1943	1,500,000	Pennsylvania Turnpike Commission	3 3/4	1968		x
Dec. 1946	46,000,000	Pennsylvania Turnpike Commission	2 1/2	1976	x	
Aug. 1948	134,000,000	Pennsylvania Turnpike Commission	Various	Serial		x
Sept. 1949	77,500,000	Pennsylvania Turnpike Commission	2.905	1988	x	
Oct. 1951	35,000,000	New Jersey Turnpike Authority	3.205	1986	x	
June 1952	326,000,000	Ohio Turnpike Commission	3 1/4	1992	x	
Sept. 1952	65,000,000	Pennsylvania Turnpike Commission	2 3/4, 3	1970-1982		
May 1953	125,000,000	New York State Thruway	Various	Serial	x	
July 1953	150,000,000	New Jersey Garden State Parkway	3, 2 3/4	Serial	x	
Sept. 1953	125,000,000	New York State Thruway	Various	Serial	x	
Oct. 1953	150,000,000	New Jersey Turnpike Authority	3 3/8	1988	x	
Nov. 1953	135,000,000	New Jersey Garden State Parkway	Various	Serial	x	
Dec. 1953	280,000,000	Indiana Toll Road Commission	3 1/2	1993		
Feb. 1954	40,000,000	Jones Beach State Parkway Authority, N.Y.	Various	Serial	x	
Apr. 1954	233,000,000	Pennsylvania Turnpike Commission	3.10	1994	x	
May 1954	239,000,000	Massachusetts Turnpike Authority	3.30	1994	x	
June 1954	300,000,000	New York State Thruway Authority	2.3/4, 3.10	Serial	x	

(Continued)

<u>Date</u>	<u>Size of Issue</u>	<u>Issue</u>	<u>Coupon Rate</u>	<u>Maturity</u>	<u>Blyth's Position was Manager</u>	<u>Major</u>
June, 1954	\$ 39,000,000	Kentucky Turnpike Authority	3.40	1994		
Sept. 1954	160,000,000	Kansas Turnpike Authority	3 3/8	1994	x	
Oct. 1954	95,000,000	State of Virginia Toll Revenue	3	1994		x
Oct. 1954	65,000,000	Mississippi River Bridge Authority	3.60	1994	x	
Nov. 1954	180,000,000	Maryland Bridge Revenue	Various	Serial	x	
Nov. 1954	20,000,000	New Jersey Garden State Parkway	3.25	1994	x	
Dec. 1954	50,000,000	New York State Thruway Authority	Various	Serial	x	
Dec. 1954	68,000,000	Oklahoma Turnpike Authority	Various	Serial		x
Dec. 1954	88,000,000	Chicago-Calumet Skyway	3 3/8	1994	x	
May 1955	34,000,000	New Jersey Turnpike Authority	2.80	1988	x	
June, 1955	74,000,000	Florida Turnpike Authority	3.25 -	1995	**	
Sept. 1955	69,000,000	Richmond-Petersburg Turnpike Auth.	3.45	1995	x	
Oct. 1955	415,000,000	Illinois State Toll Road Authority	3.75	1995	x	

* Purchased from Reconstruction Finance Corporation
 ** Financial Advisor to the Authority.

November 18, 1955

The memoranda goes on:

"Time and Cost

The undersigned have not consulted with attorneys or engineers with respect to the proposed toll roads for Ontario and thus are not in a position to estimate either how rapidly they can proceed with their portion of the studies involved, or what will be the cost of their activities. On the basis of the time required for other similar projects in the United States, however, it is likely that the preliminary traffic and civic engineering reports will take from three to six months to prepare, while the final reports which serve as the basis for financing will take an additional six to nine months."

We think this will assist the Committee to make up its mind as to whether toll roads are financially feasible.

Then the concluding two paragraphs read:

"Following receipt of preliminary feasibility reports, the undersigned, if they are selected as Financial Advisors, will be able, within one month, to make recommendations in written form with respect to whether or not to proceed to

secure final engineering surveys. Upon receipt of the final engineering reports, they believe that financing can be consummated within three to six months, providing the reports when correlated are favourable so far as financing is concerned.

It is difficult, if not impossible, to specifically answer the question regarding the amount of fee for the services which have been outlined to be performed as Financial Advisor. It is suggested that a meeting be held with your Committee in order that we may better understand the problems involved, and further that the Committee may better evaluate our qualifications. Following the meeting, it is believed that we would be in a better position to submit a formal proposal to act as Financial Advisors, and this proposal would cover the matter of compensation.

Then the document thanks the Committee, and I echo that sentiment, and it is signed by the representatives of the three firms which I represent.

There is not a great deal more I can add to that, except to say that this is a matter of the greatest importance; it is new in this province, and, indeed, is new in the world, this whole business of revenue financing for roads.

My clients, particularly Blyth and Company, are, I am informed, perhaps the best-qualified people in the United States in this particular field, and with the most experience; at least, no one has had any more, and it seems to me and to you also, I hope, that they could give advice which would be of the utmost benefit either to the Committee at this juncture, or to whatever permanent Authority or Commission may be set up to implement whatever recommendations this Committee may make.

Mr. Morgan, who is an expert on this whole problem, is here, and I thought there might be questions members of the Committee would like to ask him about this problem of revenue-bond financing. He is here for the purpose of trying to answer any of your questions. Not only do we invite questions, but we would like to have them asked, because we are anxious to be helpful to the Committee at this juncture, if we can do so.

MR. CHILD: Based on the toll roads already done, what is the fee for this?

MR. SEDGEWICK, Q.C.: Mr. Morgan can tell you what has happened in other states, in regard to what might be called "the whole of the preliminary work".

MR. MORGAN: Are you discussing that with reference to the work we did, or the work the engineers

also did?

MR. CHILD: No, the financing itself; what is involved in it?

MR. MORGAN: These projects usually take about one year or one and one-half years to really get off the ground, and get going.

Usually speaking, the engineers will put in their fees which vary as between engineers, depending upon the amount of work they think they have to do.

The financing end of the thing -- and I take it you are directing the question directly to us as financial people -- we usually get paid in one of two ways. We are paid either a fee for acting specifically as financial advisors -- and by that I mean we are hired in the same manner as you hire an attorney to do a job of work for you.

Or we get paid because of the fact that we handled the bonds; in other words, we get paid for being the financial underwriters, and these fees will vary depending again on the job which is done.

I think before we try to determine a fee, that we should try to find out what kind of work we have to do.

MR. CHILD: What would be the fee on the other turnpikes?

MR. MORGAN: Most of the other turnpikes' fees

are on the basis that we are acting as underwriters for the bonds, and maybe will form an underwriting syndicate.

If I may refer back, here (indicating) is the State of Ohio deal.

Our firm was the General Manager there. I think the underwriting fee there was two points per bond, and that took in, not only the selling of the bond, but the setting up of the bond, and other things.

MR. CHILD: Did you say "two percent." or "point two percent."?

MR. MORGAN: Two percent. there.

That was the fee for serving as the underwriters for the entire project, and that money was spread out amongst the various bond houses which sold the bonds.

Our fee was much smaller, because we took a very insignificant portion of that amount.

Usually the fee will run anywhere -- if you serve as Financial Advisors -- from \$1.00 per bond to maybe \$2.00 a bond, but that is not when you do not act as underwriters.

MR. AULD: When you speak of "\$1.00 a bond", you are speaking of the \$100. bonds?

MR. MORGAN: I am speaking of the \$1000. bonds.

Again, we do special studies from time to time,

or matters of that sort. These things take a long time. They take a great deal of required concentrated effort.

MR. CHILD: On the Ohio Turnpike, I understand the amount was \$326 million; your fee would be something like \$326,000?

MR. MORGAN: Actually, we did not act as paid Financial Advisors there. We served as underwriters, and we got our profit because we handled the bonds.

MR. AULD: Could you tell us what the Financial Advisors are paid?

MR. MORGAN: They get a management fee, based on the fact that they managed the underwriting syndicate.

I do not believe I am at liberty to say what the fee was. Actually, it was spread amongst about a dozen different firms. It represented the culmination of about five or six years' work. The actual financing took place in 1953, but the work, as far as we were concerned, started about 1948.

MR. CHILD: This may be an unfair question I am asking you.

MR. MORGAN: It is not unfair, but I do not know at this stage -- I am not sure what good it will do you.

MR. REAUME: When the time comes to employ a man or a firm to advise us, after receiving all the

information, we could then enter into some sort of a deal on a specific arrangement.

MR. MORGAN: A Financial Advisor is pretty much the same as the employment of a lawyer.

MR. SEDGEWICK, Q.C.: Something like engaging a lawyer, but they get much more money.

MR. REAUME: I have had some experience in selling bonds and matters of finance. You enter into a specific arrangement, comparable -- only in a bigger way -- with a fellow who is building a house for you.

MR. MORGAN: That is right.

MR. REAUME: Now, there is one question I want to ask in regard to these revenue bonds: they do not, in any way, pledge the credit or hurt the credit of the province of Ontario one bit?

MR. MORGAN: That is correct.

MR. REAUME: The revenues for the principal and interest on the cost of the highway would have to come out of the highway itself?

MR. SEDGEWICK, Q.C.: That is correct.

MR. MORGAN: This is what usually appears in it (indicating).

"The enabling Act further provides that neither the credit nor the taxing power of the State, nor any political subdivision thereof be pledged

for the principal or the interest on the project".

That is in regard to revenue bonds.

MR. REAUME: Following along that line of reasoning; assuming the amount of revenue you get from the road was not of sufficient amount to make your interest and principal payments on the cost of building it, what happens then?

MR. MORGAN: In that case, the revenue bonds -- if the revenues are not sufficient to meet the interest on the debt services, then the bonds might well go into default.

We have one in our country right now -- the West Virginia Turnpike -- which, at the present time, is earning about 60 percent. of its interest requirements. That is a risk security which is bought as a risk security by the people buying.

MR. REAUME: I suspect that all that would happen in any province, would be that it would indirectly affect the credit of the province. It would cast some sort of a black shadow upon the province?

MR. MORGAN: That is a good question, but is one which is very tough to answer at this point, because we have had no toll roads in the States go into default.

However, we do have some which are not doing too well, and if West Virginia, for example, goes into

default, it will hurt the credit of the State, that is sure.

MR. REAUME: I know of instances where bridges or tunnels have been built, where, starting off the original project, would require the expenditure of millions of dollars -- \$20 million, we will say -- and John Jones, and "Pete" Smith -- average investors -- have put in \$500 or \$1000, only to find in five years' time that the thing is not a going concern, so he is pushed out -- watered out, only to find out in the future, that after all the "small fry" have been pushed out in the cold, a handful of people are enabled to secure that \$20 million project for, say, \$8 million.

I may say that I was not in on that particular deal, but there were others who were.

MR. SEDGEWICK, Q.C.: I know of it, and I know you were not, Mr. Reaume.

MR. REAUME: Some of these were built years ago, and I can still hear the echoes of the people saying, "There must have been something wrong; in the original instance, the cost of building the enterprise was high, and, consequently, I was one of the 'birds' who got caught in the middle".

I know the revenues coming from the roads would have to go to the roads by way of principal and interest,

but what bothers me is in the event the amount of money you get from the whole road is not a sufficient amount to pay the interest and principal and upkeep properly of the road, it might, of course, in some indirect fashion, cast a shadow upon the credit of the province, and I think in dealing with the entire picture, we have to certainly think of the credit of the province as well.

Not that I am opposed to toll roads at all.

MR. SEDGEWICK, Q.C.: That is why my clients are here, because it is of the utmost importance that the province should not embark on a toll-road scheme unless it has the most competent advice it can secure, so it can be reasonably sure the scheme will pay off.

MR. REAUME: I do not know anything about Blyth and Company, but I know that Mills, Spence and Company is a reputable and very good company.

MR. MORGAN: You have a real problem. I think in the United States, some of our investors lost sight of the fact that for construction it is a different matter in regard to financing.

After all, when you buy one of these bonds, you are buying the opinion of experts. First of all, you are buying opinions from traffic engineers that a project when it opens in 1956, 1957 or 1958, will have

"x" number of vehicles going over it in that particular year, and that it will generate so much traffic.

Take, for example, the West Virginia thing. The first year it was opened, it was expected to have a revenue of about \$5 million. The figure is that the first year's revenue will be less than \$3 million.

MR. REAUME: May I ask a question at that point? Where is that road?

MR. MORGAN: It runs between Charleston, West Virginia, and Princeton. It is about 88 miles long. Princeton is a very small community of about 10,000 or 12,000; Charleston has about 80,000.

MR. REAUME: Yes, I have been in Charleston. I wonder if it was a good place to construct a toll road.

MR. MORGAN: I know my own firm stayed out of that project. I am not, in any way, trying to be derogatory to the road, because it might ultimately work out to be a good thing.

But there is one case where the estimated traffic revenue was not met. The road was to be financed with \$96 million of bonds. When they finished it, they had to finance \$133 million of bonds, because it cost more than they originally figured.

You are selling the wisdom of competent, reputable engineers, but sometimes even they make mistakes in giving

estimates.

MR. SPENCE: As far as damaging the credit of the province; that would be the last thing we would ever want to do. Even more than that, it would be the last type of financing our firm would want to be associated with.

It would do us irreparable harm if we sold securities to the public which were not absolutely sound.

MR. REAUME: That is true.

MR. MacDONALD: Following Mr. Reaume's question; in the experience of the companies whose representatives we have here; what would have happened if a government had guaranteed the bonds from the outset?

MR. MORGAN: Let me answer it this way, and give a specific example.

If you had a government-guaranteed bond at this particular juncture, it would sell at an interest rate, let us say, of three and one-half percent. or three and three-quarters percent., and there would never be any question. It would be another project, in just the same way as your Ontario Hydro is guaranteed.

On the other hand, that might well react unfavourably to the credit of the province -- and I am speaking in terms of the general obligation of credit -- because it would increase the debt of your province very

materially.

It might be that you, in your wisdom, decided you did not want to increase the debt of the province in that manner.

There is another approach, where you can agree to have the provincial Highway Department assume the operating expenses of one of these projects. That is what happened in the State of Kentucky, in our country.

That, in turn, made the project a little more feasible. It also made it a project which bore a better interest rate than it might have otherwise.

Then you have the third alternative; perhaps your province would agree to pick up the deficit on such a project.

We, in our country, feel that a guaranteed bond, to some degree, is not as good a bond as the revenue type of bond, on the theory that when you have guaranteed a bond, there is not the same care on the part of the operating department to do a good job, as when you have a revenue approach, and they, in effect, have to stand on their own bottoms.

You have a degree of responsibility from the management angle which we feel is worth something.

MR. REAUME: The only other thing is when a person is buying a bond, when the credit of the province

is standing behind it. I think myself, as a small person, I would like to have a guarantee of the province of Ontario.

MR. MORGAN: All I can say about it is that the guarantee might get you a three and three-quarter percent. rate. Without the guarantee -- well, I do not know, but I would guess the rate would be four and one-quarter percent. or four and one-half percent., or something higher. It would be a much higher interest rate.

In our country, when New York sold some general obligation bonds at a two and one-half percent. rate, these revenue bonds sold at 3.10 percent.

You ask why there is that difference. You must remember that our bonds are exempt from Federal taxation.

MR. REAUME: And I think a person from the States is more of a gambler. He will take a chance.

MR. SEDGEWICK, Q.C.: These would not be sold in the United States.

MR. MORGAN: Let me point out one thing. You get your big issues, and they are not, to a large degree, bought by gamblers.

MR. REAUME: Perhaps I used the wrong word.

MR. MORGAN: They are bought by major investing institutions, such as life insurance companies, and others

of that ilk.

One reason why I qualify as a person who knows something about it, is that I formerly worked for a life insurance company, and bought this type of bonds. They do not feel they are gambling; they feel they are taking a calculated speculative risk. However, they are getting a little skeptical, and are rather more careful than they were two or three years ago.

MR. REAUME: Is there a higher interest rate without a guarantee? Do they go quicker? If you go up with a bunch of bonds, and there is a ready market, which of the two will move the more quickly?

MR. MORGAN: We do not have too many guaranteed-type bond, but if you put enough rate of interest on them to make them reasonably attractive, you will probably find somebody who will buy them. But you have to have much soul searching, and much checking, and a careful analysis of the activity.

MR. REAUME: I am of the opinion that the investors are quicker to buy guaranteed bonds.

MR. MORGAN: There is no doubt about that.

MR. SPENCE: The other alternative is that our firms -- Mr. Hampton's and mine -- financed the Halifax bridge. We did not have a guarantee, nor is it a pure revenue bond. We were skeptical of the traffic flow they

would get between Halifax and Dartmouth, and the province of Nova Scotia guaranteed the deficit on the traffic there.

The revenues from the bridge went to the servicing of the debt, realizing if it was not sufficiently heavy, the province guaranteed the deficit, and thereby avoiding a direct guarantee, but protecting the investors.

MR. MacDONALD: Is that not considered as a guaranteed bond?

MR. SPENCE: I have heard that answered both ways. It is a contingent liability. It does not appear as a debt of the province, but it does appear as a contingent liability, whereas a guaranteed bond itself appears as a direct debt of the province.

MR. REAUME: It is a little more than that.

MR. AULD: Would that be the case where the immediate traffic prospects might have looked questionable, but perhaps in five years --

MR. SPENCE: That was exactly the point. We did not think the traffic across that bridge was sufficient to carry the bridge.

Luckily, we found -- unlike the case about which Mr. Morgan spoke -- that our traffic engineers had underestimated by about 50 percent. So the province has not been called upon to carry out its obligation at all.

We felt that the traffic would build up, but in the early stages it was possible there would not be sufficient traffic.

MR. CHILD: It is best to be conservative, of course.

MR. SEDGEWICK, Q.C.: Yes, with a small "c".

MR. MORGAN: There is one other thing here to which I would like to refer. I think all of you have this little booklet (indicating), and I would appreciate it if you would not mind turning to the next to the last page. That shows some toll roads there.

It shows the estimate coverage for interest in the second year's revenue for various projects.

As you will notice, West Virginia is 1.06, Ohio is 1.81, Maine is 1.35, and so forth.

Let us assume, for example, Indiana, with 1.46. In the fifth column, the estimated coverage of revenue, the maximum interest of the Indiana project was 1.46.

That means that our engineers have estimated the revenue of the Indiana 'pike will be, let us say, one and one-half million dollars -- I am just picking out the figures -- and the interest on the project will be one million dollars, so your interest coverage on that would be ^{about} one and one-half times, or 1.46.

That is based on a three and one-half percent.

interest rate.

You in Canada will have to add this to your taxable money, rather than having it tax exempt, so that to meet your interest in Canada, you would have to have, not perhaps the three and one-half percent. interest rate, but maybe four percent. interest rate.

What I am trying to say is, if your interest rate is four percent. it would increase the amount of money you would have to earn on that project, to get your coverage.

That is another reason why Mr. Spence's idea might help you, because while your coverage might not be as great in Canada, at the same time you additional revenue coming through from the guarantee of the province might help you to finance your project.

MR. AULD: That 1.46: does that mean on estimated total revenue, or after maintenance?

MR. MORGAN: The estimated revenue after maintenance.

MR. AULD: In that case, the .46 would be available for early retirement of the capital?

MR. MORGAN: Yes, that .46 would be available for the early retirement of the capital, but that .46, while it is available, at the same time you cannot issue as many bonds at this rate as you might want to.

MR. MacDONALD: Is not that .46 the safety margin?

MR. MORGAN: That is right.

MR. MacDONALD: Your 1 percent. is for meeting the capital?

MR. MORGAN: Yes.

MR. AULD: The .46 would be the excess at the end of the year, after paying maintenance, and so forth?

MR. SEDGEWICK, Q.C.: Perhaps the paying out of bonds would be effective. You should be able to amortize the bonds then for the number of years set out in that column (indicating).

MR. MacDONALD: On this point, would Mr. Morgan venture a comment as to what extent the margin of safety can be reduced if the bond is guaranteed?

MR. MORGAN: If the bond is guaranteed -- and I will be quite honest -- I doubt if we would care, because we would not be buying a bond of the toll road; we would be buying the bonds of the province.

MR. HAMPTON: Buying the credit of the province of Ontario.

MR. REAUME: If the province would guarantee the bond, it would be equivalent to holding a debenture of the province of Ontario.

MR. SEDGEWICK, Q.C.: Yes, except you would be

increasing your debt and your whole borrowing power would be affected, whereas, if you were buying revenue bonds, you would have preserved intact the credit of the province.

MR. SPENCE: In regard to this question of "borrowing power", brought up by Mr. Sedgewick: we have, at various times, talked with the province with the idea of endeavouring to make The Hydro-Electric Power Commission bonds stand on their own feet.

As you know, The Hydro-Electric Power Commission is empowered to set the rates to cover their debt, and that sort of thing. But the province, in its wisdom, decided, in order to get the lower interest rate, to start the program of original financing by the province of Ontario -- period.

But in order that the province would not have too much apparently direct debt, they made them the province of Ontario guaranteed bonds.

We have had discussions with the province as to whether straight Hydro-Electric Power Commission bonds could be issued, and we believe they could. But we frankly stated to the province that the interest rate would be higher, despite the fact that the Hydro Commission has authority to alter its rates. But the point is they only have authority to alter their

rates after the fact, and not before it. In other words, they have to get into trouble before they can put their rates up. They cannot put their rates up to avoid getting into trouble.

MR. AULD: In the State of New York, they told us that the state has, in effect, a second mortgage, and they issued authority to back -- I forget the exact figure -- something like \$500 million.

MR. MORGAN: Yes, and they will have the full \$500 million out before the next year is over.

MR. AULD: There are additional bonds which are straight revenue bonds.

MR. MORGAN: The way the indenture is set up, I think they issued one-half billion dollars of revenue bonds which have a first claim on the revenues of the state.

Then you have the state bonds which have a second claim on the revenues, and which are guaranteed by the State of New York.

MR. AULD: In effect, the state again is guaranteeing the deficit?

MR. MORGAN: Yes, but it is more than that. It is an outright guarantee. In other words, the bond holders can go in and require the state to raise taxes in any way they see fit. It is in the same category as

your province of Ontario guaranteeing bonds for the Hydro. It is a guarantee.

What happens there? They set up in their scheme of things, a rate structure which, on the basis of their estimates -- which, incidentally, are not being met at the moment-- but that is another story, and I will not take up your time with it now -- they have estimated the thing will be self-supporting over-all, so they will not become a drain on the tax payers.

MR. ROOT: In your opinion, are toll roads the best way of financing major road projects, or should the state borrow the money, and build the roads?

MR. MORGAN: May I answer this one, Mr. Spence?

MR. SPENCE: Yes, certainly.

MR. MORGAN: Let us think about that a bit.

Let us go over to Windsor --

MR. REAUME: Now you are starting at the proper place.

MR. MORGAN: Then we get to Buffalo.

One fine day, I went across the river at Niagara Falls, and as I stopped there to get myself validated, or to see if I looked honest, while I was standing there, I heard ten people say they were going from Niagara Falls to Detroit.

What does that mean? These fellows going across

Canada know that your gasoline rates are high, so they fill up their tanks in Buffalo, and I do not know how you can make them pay the gasoline tax in Canada.

MR. REAUME: Only by putting a hole in their tanks.

MR. MORGAN: Then he gets on your road and goes across Canada and comes to Detroit, and you people here in Ontario are paying for a road for him. That is perfectly alright, but by the same token, should he not have to help pay to support the road between Niagara Falls and Windsor. That is the real advantage of a toll road; you are getting the persons who use the road to help pay for operating and building it.

MR. ROOT: Supposing we put a toll road there, and then a government in the United States decides they will cut the price to attract the traffic around the other side of the lake? Then we will be "stuck" with the road.

MR. MORGAN: Are you "stuck" with the road?

MR. ROOT: The province is "stuck" with the road.

MR. MORGAN: What I am trying to say in effect is that the traffic estimates about which we know anything, indicate that -- I think at the moment we have 55 million motor cars in the United States. I am not

speaking of Canada, because I am not up on your statistics, but I am in the United States.

We have 55 million cars now, and the General Motors and other manufacturers tell us we will have 70 million or 75 million in 1970, so we are all faced with the problem of getting enough money to build the roads we need.

The State of Michigan, from figures received the other day, think it will cost them two and one-half billion dollars to build the roads they will need in 1970 in that state alone.

They have estimated in Michigan that to do that, they will have to raise their gasoline tax level from 4 cents to 9 cents or 10 cents a gallon. That is United States' gallons, not Canadian.

Now, the toll road, being self-supporting, helps to take that load off of certain people who might not otherwise want to "pay the freight". It makes the fellow who uses your road help to pay for it. That is the advantage of it.

MR. REAUME: It might not be possible on that road on the other side on account of the extra travel. They would have to travel 120 miles extra.

That gets us back to one question I wanted to ask. I suppose the Albany road to Buffalo, and the Ohio

toll road are all paying, are they not?

MR. MORGAN: The Ohio road has only been opened a month, so we do not know too much about it yet.

MR. REAUME: Then take the Albany road coming into Buffalo.

MR. MORGAN: Yes, it is, fairly well, but they have some excuses about it, because one of their revenue producers is not yet open, that is, the bridge down in New York state.

MR. REAUME: It would appear from the scheme of things, if we were to build a road from Fort Erie to Windsor, it would be somewhat a lesser distance --

MR. MORGAN: That is right. Now to drive from New York to Detroit, via the United States, is about 800 miles. Going by your project, it would be about 625 or 650 miles. You are closer to that than I am.

MR. REAUME: It is a saving, as I understand it, of approximately 120 miles.

MR. MORGAN: That is right.

MR. REAUME: Then it would follow, would it not, that it would induce the people going that way, into coming to Canada, and travelling on our road?

MR. MORGAN: That is right.

MR. REAUME: In your opinion, or in the opinion of anyone, would you think that any of the places in the

province of Ontario, where we are now speaking about building roads, would be the proper place to build them?

MR. MORGAN: No, I will not "stick our necks out" on that.

Let me point out one thing. In the United States, we have found that the thing which pays for toll roads is the short-distance traffic.

To cite an example; the New Jersey Turnpike is 118 miles long, and the average distance travelled on the Turnpike is about 42 miles. There are a great many people who use it for only 20 or 25 miles.

I happen to live in New Jersey, and I always use it when I go to New York for 11 of the 20 miles. That is all I get on it. And there are many others who take similar short trips.

You might not get too many short trips between Fort Erie and Windsor. I do not know. It is these short trips which help to pay.

Again, you may get enough of the long trips so you would not need many short trips. I cannot answer that question, as I cannot qualify. Perhaps your engineers in the province could give you a reasonable answer to that question.

But, by and large, the thing which makes your

road pay is the density of traffic.

MR. CHILD: Are there not usually freeways in the suburbs?

MR. MORGAN: Yes, but if it is congested, with stop lights and fringe development, you will find people will pay the cost of riding on the toll road.

I will "stick my neck out" on that, to this extent, that I do not think a toll road would pay which would parallel your Route 401, running west of here, because that is a high-grade divided road.

MR. CHILD: That is something like the Queen Elizabeth Way. It is a beautiful road.

MR. MORGAN: That is correct.

MR. CHILD: That is the road I was particularly thinking of for short trips, because for five or six miles out of Toronto, there is a density of traffic to the new suburbs.

MR. MORGAN: On the other hand, we have places in the United States where there are no good competing roads, and our toll road works out very nicely.

MR. CHILD: You are talking about the toll road where there is not a good freeway?

MR. MORGAN: That is right.

MR. CHILD: If there is a good freeway, it affects the toll road?

MR. MORGAN: There again, we are getting into the realm of the traffic engineers.

MR. ROOT: The road from Fort Erie to Windsor is a corridor road. Do you think we should have that road financed by the province, or issue bonds to build the road?

MR. MORGAN: That is a tough question to answer.

MR. ROOT: What about California?

MR. MORGAN: California, in its wisdom, has decided it will not use toll roads. They have a situation which is almost unique in the United States.

In the first place, they have the highest number of vehicles per population of any place in the United States.

In the second place, when you get outside of the main cities, you have great, long distance, with very inexpensive, low-populated drive ways, so it is a very easy job in California to lay out a line without a free road.

Usually, we find our turnpikes are put any place where the traffic is so heavy, and where a road of high calibre is required, and therefore when spending the money for that type of road, the people go to the toll-road type of good roads, which are self-supporting.

It is a tough question. I think you have to

pick each of these segments of those areas carefully, and decide what you are going to do about them.

But I would guess for Ontario, you are like the United States, where we have a problem where we are running out of money. In our State, if so many people want the money for roads, they have to go to the toll roads.

MR. MacDONALD: Do you know of any city in the United States where an existing four-lane highway has been switched to a toll road, after it has been operating for some time?

MR. MORGAN: No, sir, I know of none.

MR. YAREMKO, Q.C.: Getting back to question number three. That will take some time for consideration. Has there been any American experience along that line, that is, partially self-supporting roads? That is the number three question you outlined for us.

MR. MORGAN: We have in New Jersey a road known as the "Garden State Parkway", which the preliminary traffic estimates indicated would about earn enough money to meet the debt service of the project.

It goes from northern New Jersey down along the shore to Cape May. That is a very seasonal type of area. You cannot find enough people on that road on a day like this to bother getting the cows off of it.

Yet, in the summer time, the road is completely cluttered up.

New Jersey, in its wisdom, decided they should build the turnpike project as a state-guaranteed project. That is the gamble.

You people are familiar with the New York State Thruway. That is another example. The debt services of the guaranteed bonds would be met the other way.

There is also one out in Colorado, where the state has agreed to pay up to 30 percent. of the debt service, if necessary. It is a small toll road called the "Denver-Boulder Road".

MR. CHILD: Is there any reason why a government could not put a toll road in, and receive only 50 percent.?

MR. MORGAN: Not a bit.

MR. CHILD: The road has to be built, and somebody has to pay for it.

MR. MORGAN: That is right.

MR. CHILD: If the public pays 50 percent., that is 50 percent. the province would not have to pay, and that money could be diverted for other roads.

MR. MORGAN: That is right.

MR. SPENCE: That is what we figured would happen on the Halifax bridge.

MR. YAREMKO, Q.C.: The part which is self-supporting would be financed without the provincial guarantee?

MR. SPENCE: It would only require a guarantee of the deficit, not of the complete debt. It would be a guarantee of the revenue sufficient to guarantee the Authority which built the road. They have to put up the money, but not all of it. They put up what they have to put up, but not any more.

MR. MORGAN: We have a project we are working on now in the State of Washington, called the "Tacoma-Everett Toll Road".

In that particular instance, the coverage is not sufficient to sell revenue bonds, so the State Legislature has approved a measure whereby the state will put up \$5 million a year from gas tax money to help support this project, provided the money is necessary.

In other words, they will say, "Here is \$5 million of our gas tax money which can be utilized for this project, if it is necessary".

If it is not necessary, the money is not received.

MR. REAUME: I suppose, in the over-all picture, that after the expert has estimated the traffic --

MR. MORGAN: I think they can best answer those

questions.

MR. REAUME: But if the experts say, "We think there is not sufficient business to justify the road", then the interest rate on the bonds you offer, makes the gambling the greater, and the province will have to step in and guarantee the deficit.

The only way I see where the investor is really interested, is in the guarantee of the amount, and if you do not make it from the operation of the road, because we never hear very many complaints so long as business is good. It is the overdrafts which worry us.

MR. SPENCE: That is perfectly right.

There is one point which might possibly be of interest to you, about which I asked Mr. Morgan prior to our coming up here.

In our submission to you, when we were speaking of the method of approach, and we spoke of the preliminary approach, which would be the preliminary examination of the traffic data, that is not too expensive a proposition.

In other words, if you have a situation such as the road of which you are speaking from Niagara Falls to Windsor, to get a preliminary report -- which is only a report -- which is sufficient to either justify the road or not, but a real report -- might cost in the neighbourhood of \$15,000.

MR. MORGAN: I think that is a little on the low side.

MR. SPENCE: It might be from \$15,000 to \$25,000, whereas, if the report was prepared to the extent which would justify a complete report, then the complete report, which would have the support of financing, is much more expensive.

But the preliminary report is not an expensive proposition.

MR. AULD: Even if the province or the state guaranteed the principal, or the deficit, or something like that, it would still be necessary to make those surveys?

MR. SPENCE: I think the province would require them for its own protection.

MR. REAUME: Yes, that would be the first step.

MR. SPENCE: Mr. Hampton's firm and I are engaged in financing a bridge across the St. Lawrence River down near Three Rivers. The preliminary report was sufficient to justify a complete report.

MR. YAREMKO, Q.C.: A couple of weeks ago, there was a \$415 million bond issue in Illinois. How did that go?

MR. MORGAN: It went very well. The figure I quoted today was as a premium above the offering price.

I think some of us were quite concerned about the interest rate which was required to sell that volume of bonds.

The bond business is like cigarettes; you find a certain number of people will buy a brand at one price, while another will pay the same, but buy a different brand.

When you quote a price, you will find a certain number of people who are willing to buy them.

In this case, we had to get a rate of three and one-quarter percent., whereas some might be bought at three and one-half percent.

MR. AULD: What would you say about the provincial bonds being sold in the United States, where the interest from them is not taxable, and the same bonds sold in Canada, where it is?

MR. MORGAN: You have us in a bad spot, because there are no bonds sold in the States which are only revenue. Most of them are guaranteed by the state or province.

MR. AULD: If they were guaranteed, would you say there would be a difference of 1 percent.?

MR. SPENCE: About 1 percent.

MR. HAMPTON: One-third to three-quarters is normal.

MR. AULD: That would make up the difference in taxes which would have to be paid.

MR. REAUME: If the bonds were sold here, and controlled over there, we would have to pay them back in what funds?

MR. MORGAN: In U. S. dollars.

MR. HAMPTON: There is some small risk.

MR. REAUME: You would have to specify on the bonds that they were to be paid off in Canadian money.

MR. SEDGEWICK, Q.C.: It may work against us sometimes.

MR. REAUME: Could we afford to take that gamble all the time, when dealing with public funds -- selling a bond. We have been "hooked" on them.

Well, maybe "hooked" is not the proper word. We have been "stung".

MR. SEDGEWICK, Q.C.: We have had it both ways. We have redeemed bonds when our dollar was at a premium, and we have at other times paid the premium.

I do not know on balance how it will work out. Colonel Hampton might know.

COLONEL HAMPTON: Canadian bonds are for local investors, for most investments today. If they are paid in Canadian dollars, the financing must be largely done in Canada.

There may be minor exceptions, but they are very few.

MR. SPENCE: I think you will see in the next six months a tremendous amount -- not necessarily of the province of Ontario -- but I am perfectly certain that with the market conditions as they are right now, you will see a number of our governments issuing bonds in the United States, within the next six months.

I know there is one issue in process of negotiation at the present time, -- not Ontario, but another province.

It is a question of having to go where the money is, unfortunately.

MR. REAUME: That is always true. I am not opposed to the idea, mind you.

MR. ROOT: On this question of the cost of financing: why does the interest rate vary so much when there is a revenue bond, which you mentioned, at three and one-half to three and three-quarters percent?

MR. MORGAN: One of the factors which makes it vary is the size of the project. I mentioned that in the case of Illinois. The issue was so big that to get enough investors to buy that many bonds, they had to make the interest rate fairly high.

The other factor is the matter of coverage .

I mentioned a little about that. Anyway, one was at 1.50 and the other was at 1.75.

At other times it is the territory which is to be served. You will find the sophisticated investor is more inclined to put money in a heavily-populated area.

There are as many different factors as I have fingers and toes.

THE ACTING CHAIRMAN: Are there any further questions to ask of these gentlemen?

MR. MacDONALD: I have one general question which relates to toll roads, and which also relates to the Hydro, mentioned by Mr. Spence.

From your point of view, I would judge, from an earlier remark, that you would prefer that government-guaranteed bonds be issued, which would put the Authority or the Commission, on its own feet, like Hydro?

What is the advantage of that?

MR. SPENCE: There would be bonds of a different type issued. In other words, in the markets, the way they are today -- the American market, the Canadian market, or the English market -- there is a pool of funds available for investors in various types of securities.

There is some money which will only be invested

in Canada in Dominion of Canada bonds. Other money will be invested only in the province of Ontario, or The Hydro-Electric bonds, but there is no pool of money in order to get the higher yield from bonds of a public utility, like the Bell Telephone Company, in which category the Hydro would be if it was issuing revenue bonds.

The differentiation in yield would be represented by Hydro selling around 99, whereas the Bell Telephone Company bonds sell for about 3.78. They appeal to different pools of money --

MR. MacDONALD: In other words, you would have a larger pool of money --

MR. SPENCE: It would be an additional pool of money for which there are no Ontario bonds now.

MR. CHILD: There is no advantage to the province?

MR. SPENCE: Not the slightest. There would be an advantage to the province of Ontario from the fact that they would not have to worry about them.

MR. MORGAN: I realize this body has the job of recommending legislation, and there is one thought I would like to leave.

We have seen in the United States, Toll Road Authorities, and what-not, which have been set up. One

of the things which a Toll Road Authority needs to operate is money.

We have seen cases where the Toll Road Authority was set up with no money, with the idea they would get their funds from bond people and the like, who would finance their projects for them.

We, in our field, think that is a very bad situation. We feel very definitely that any legislation which you might put up -- and I am saying this whether you ever hire us or not; that is beside the point -- but we think you should have, in your legislation, some means of getting yourselves up off the ground, because, quite frankly, the traffic engineers will not turn a hand unless they are paid, and the consulting engineers will not do the job they are required to do, and should do, unless they are paid.

That all takes money, and costs money, and I hope in your legislation you will give that some thought, when you get around to it.

MR. CHILD: And have working capital?

MR. MORGAN: Yes, have working capital.

MR. SEDGEWICK, Q.C.: Mr. Morgan, could you estimate the figure?

MR. MORGAN: In the case of Massachusetts, they were given one-half million dollars for their project,

and it ran from one end of the state to the other. That was utilized to buy an engineer's report. None of it was used to pay the financial advisors, who acted on the basis that they get the bonds to sell.

In the case of Michigan, they put up \$500,000. One other state put up \$400,000, and in the case of Iowa, they were permitted \$75,000, and they are out of money.

If you get into the job, you want it done well, so do not be too niggerdly, and I am sure that Canadians will see that the money is spent properly and wisely and well.

MR. AULD: Mr. Sedgewick, I would like to express the thanks of the Committee on behalf of our Chairman, who was unable to be here, which he sincerely regrets.

You and your clients have given a great deal of very valuable information to the Committee.

MR. SEDGEWICK, Q.C.: We will leave these (indicating) with you, and we are grateful for a very attentive hearing.

MR. AULD: I would point out on the part of the Committee, that we have not made up our minds on anything as yet.

MR. CHILD: Officially, as yet.

MR. AULD: Again I would like to thank you and the gentlemen associated with you, for giving us your time today, and providing us with such valuable information. We thank you very much.

---Messrs. Sedgewick, Spence, Morgan and Hampton retired.

MR. MANLEY: Mr. Chairman, I move the adjournment of the Committee.

MR. MacDONALD: I second the motion.

THE ACTING CHAIRMAN: The meeting stands adjourned until tomorrow morning at ten o'clock.

- - - -

---Whereupon, at 3:40 o'clock, p.m., the further proceedings of this Committee adjourned until Thursday, November 24th, 1955, at 10:00 o'clock in the forenoon.

- - - -



3 1761 11466460 0